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City of Signal Hill General Plan

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CITY of SIGNAL HILL

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GENERAL PLAN

INTRODUCTION
LAND USE
HOUSING
CIRCULATION
ENVIRONMENTAL RESOURCES
SAFETY
NOISE

EIR

MASTER ENVIRONMENTAL
IMPACT REPORT

RESOLUTIONS

PLANNING COMMISSION
RESOLUTIONS
CITY COUNCIL RESOLUTIONS

AMENDMENTS

INTRODUCTION CHAPTER

of the

SIGNAL HILL GENERAL PLAN

CITY OF SIGNAL HILL

2/7/86

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I. LOCATIONAL CONTEXT

A. Regional

The City of Signal Hill is located in the southeast portion of Los Angeles County eighteen miles south of downtown Los Angeles. Totally surrounded by the City of Long Beach, Signal Hill encompasses an area of approximately 2.25 square miles and lies approximately 2.5 miles north of the Pacific Ocean.

Within the larger context of the greater Los Angeles region, the City of Signal Hill continues to be a discernible entity, characterized physically by the "Hill" which reaches above the surrounding area and which offers sweeping panoramic views of the Pacific Coast, San Gabriel and Santa Ana Mountains, surrounding Long Beach and much of the greater Los Angeles basin. Major regional access to the City is provided by the San Diego Freeway (L.A. - 405) which transects the City, dividing it into north and south.



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While vacant land is scarce in surrounding communities, over one third of the City's land area is either vacant or in continued oil production. With the anticipated release of additional land previously used for oil production, the City finds itself an oasis of prime commercial, industrial and residential land in the midst of the mostly developed South Bay area. Attributes which place the City in a prime location include:

-- 360 degree view potential from the top of the Hill, a rare resource which provides an opportunity for distinctive development;

-- A mild climate, excellent air quality and proximity to beaches;

-- Proximity to three major freeway corridors;

-- Easy access to important destinations such as the Long Beach and Los Angeles Harbors, the Long Beach, Los Angeles and John Wayne Airports, and Downtown Long Beach and Los Angeles;

-- Proximity to high-tech service industries located in Long Beach such as McDonnell Douglas and Hughes Aircraft;

-- Proximity to the Long Beach Memorial Medical Center which is recognized nationally as a major medical facility at the City's westerly boundary, and California State University at Long Beach, less than 1.5 miles to the southeast.

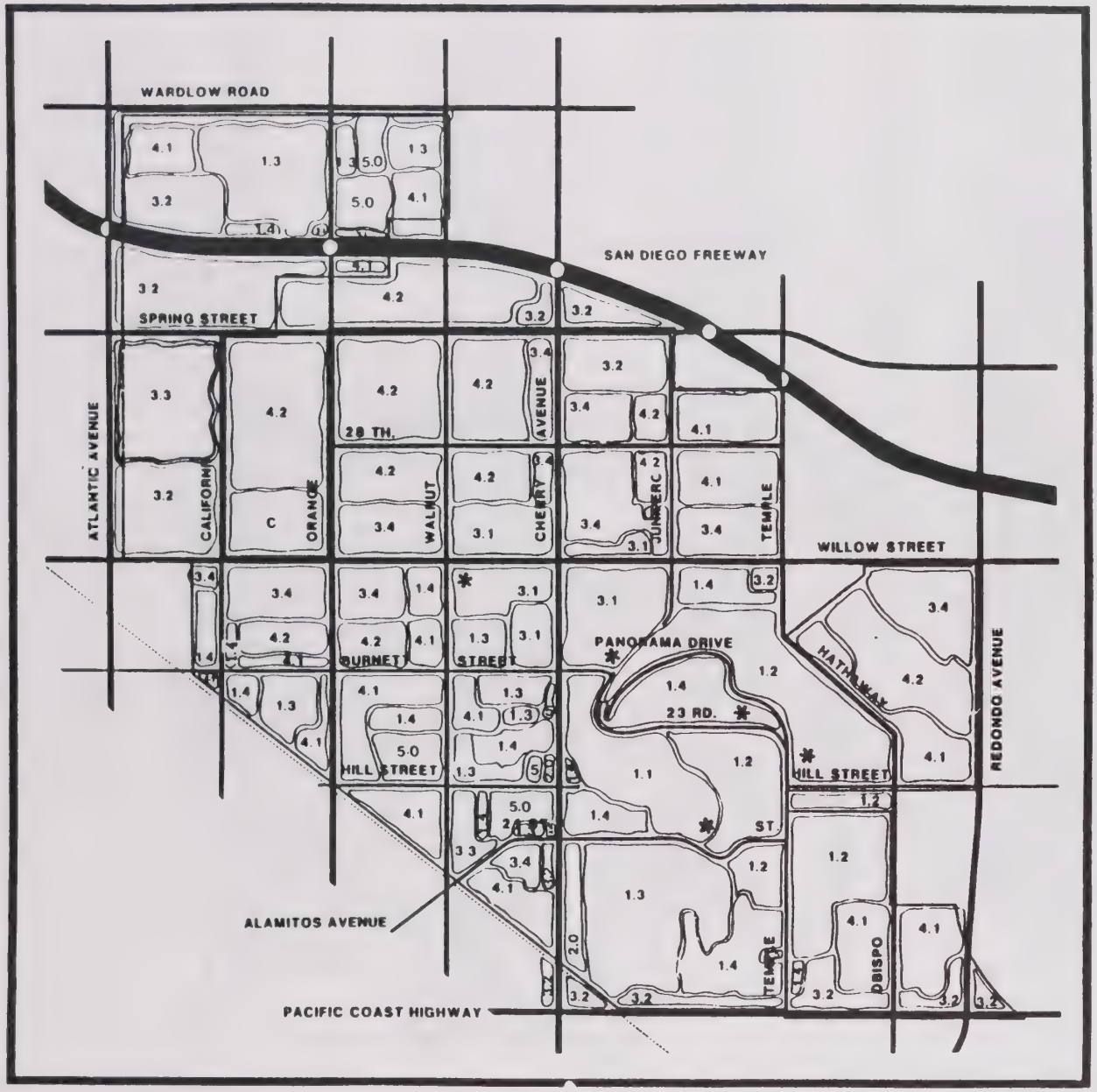
While the City's unique characteristics and vacant land resources are an attribute, they are also a tremendous responsibility. The future depends on conscientious planning and sound development decisions which recognize the City's unique characteristics and opportunities.

B. The Planning Area

The Signal Hill Planning Area consists of 2.33 square miles as shown on Figure 2. It includes all of the land within the City's incorporated boundaries as well as

Figure 1

SIGNAL HILL PLANNING AREA



LEGEND

KEY

1.1 VERY LOW RESIDENTIAL DENSITY	up to 5 d.u./acre
1.2 LOW RESIDENTIAL DENSITY	5-10 d.u./acre
1.3 MEDIUM RESIDENTIAL DENSITY	10-15 d.u./acre
1.4 HIGH RESIDENTIAL DENSITY	15-21 d.u./acre

2.0 MIXED USE

3.1 TOWN CENTER

3.2 COMMERCIAL GENERAL

3.3 COMMERCIAL OFFICE

3.4 COMMERCIAL INDUSTRIAL

4.1 LIGHT INDUSTRIAL

4.2 GENERAL INDUSTRIAL

5.0 OPEN SPACE

SPECIAL STUDY AREA

* PRECISE/SPECIFIC PLAN REQUIRED

REVISED 7/88



SCALE

0 400 800 1200 2000

CITY OF SIGNAL HILL

immediately adjacent portions of the City of Long Beach which have been identified as possible sphere of influence areas. The boundaries of the Planning Area were determined based on topography, drainage, circulation, logical service areas and the existence of social and economic interdependence and interaction between the area. If approved by the Local Agency Formation Commission (LAFCO), possible sphere of influence areas will be used in evaluating future annexation proposals.

II. HISTORICAL CONTEXT

A. Signal Hill's Past

Signal Hill first appeared as a name on a map some 95 years ago, after John Rockwell, an engineer, placed a Los Angeles baseline triangulation marker on the summit of the "Hill". By 1889, however, Signal Hill could already boast a colorful and exciting past. Legend and history suggest the "Hill" was first used by the Puva Indians in the 16th Century to send unobstructed smoke signals to the tribes on Santa Catalina Island and in the foothills of the San Gabriel Mountains. The Spaniards later either learned the technique from the Indians or reinvented it on their own, for they also used the "Hill" as a signal post to warn the missions in the basin of impending enemy attack. It is believed that it was from this custom that the name "Signal Hill" was first derived.

Two hundred years ago, the Signal Hill area was acquired by Don Manuel Nieto as part of a 3,000 acre land grant from King Carlos III of Spain. During this period the area was used primarily for grazing large herds of cattle and horses. After Nieto's death in 1804, the tract was divided among his heirs, and Signal Hill became part of both Rancho Los Alamitos (Little Cottonwoods) and Rancho Los Cerritos (Little Hills). Both ranchos prospered during the early 19th century. Later, both ranchos passed into the hands of Mexican citizens of American descent.

Able Stearns purchased Rancho Los Alamitos in 1842 and John Temple acquired rights to Rancho Los Cerritos after 1843. At first both men were successful ranchers, but the flood of 1862 and the great drought lasting from 1862 to 1864 caused severe financial hardship. Llewellyn Bixby and his family eventually purchased both ranchos, including all of the present City of Signal Hill. The Bixby's, transplanted to California from the

eastern United States, were interested primarily in sheep raising, but as early as 1880 plans were being laid to develop Signal Hill into an exclusive residential community. That year William Wilmore obtained an option from Llewellyn Bixby on a 4,000 acre tract of land which included Signal Hill, naming the development "Wilmore City". He began selling view lots on Signal Hill for $12 to $20 an acre. "Wilmore City" grew slowly despite the promotional efforts of Wilmore and, subsequently, G.W. Hughes of the Signal Hill Improvement Company.

Following the Armistice of 1918, the federal governments' "open door" policy on foreign investment in oil exploration prompted the British and Dutch controlled Royal Dutch Shell Company to gamble $60,000 on a 240 acre lease on the "Hill's" southeast flank. On June 23, 1921, after three months of drilling, Alamitos No. 1 blew at Hill Street and Temple Avenue. By sunrise, 15,000 people crowded around the gusher and the fate of the City was forever changed. This first discovery spawned speculative oil development of the area, setting the stage for what resulted in one of the richest oil fields per acre in history.

It is speculated that oil operators in the field were basically content until the City of Long Beach wanted to raise taxes. As a result of this effort, a backlash of local oil operators and workers, who lived in the vicinity of what is now Signal Hill, undertook an incorporation drive resulting in the City of Signal Hill's incorporation on April 14, 1924 with a population of 1,800.

California is now a bellwether state in predicting national trends, Signal Hill was a leader from its origin - by promptly electing as its first mayor, Jessie Nelson, the first woman to hold that office in California.

Although oil production never again approached the "gusher" days of the 20's, the field was a dependable source of oil until the 1960's when major oil company operators located in the City of Signal Hill began to see the need for secondary recovery techniques in order to accelerate the rate of production, as well as to increase the recoverable amount of oil. While over 1,000 wells were drilled and more than 845 million barrels of crude oil extracted from the "Hill" since 1921, the rate of annual production by the late





1960's was declining steadily. Continuation of primary production techniques would have been leaving a substantial portion of the oil resources in the ground.

Recognizing the decrease in productivity of the field, secondary recovery operations (a term applied to any one of several methods designed to extract additional oil out of old fields) were initiated on the hill by Shell Oil, Atlantic-Richfield, and Texaco in the early 70's. Under the plan, the field was divided into three operational units and selected wells were converted to water injection wells designed to introduce water into the oil saturated ground. The remaining oil, pushed by the incoming water, could then be more easily recovered from other specially picked well-sites. Oil produced from this operation, which involved the cooperation of all operators within each unit, was allocated based on production prior to secondary recovery. Shell Oil operated the Central Unit, Texaco the West, and ARCO the East.

The secondary recovery program has resulted in the gradual release of land in Signal Hill for urban development. Although experts estimate that 20-30 years of production remain for "the Hill", the economic feasibility of continued oil production given significantly increasing land values may influence that timetable to a significant degree.

While the City remained relatively unaffected by the population and housing boom experienced in the 50's as developers focused on unencumbered agricultural land in San Fernando Valley and Orange County, pressures to develop Signal Hill have been evident since the mid 70's. By 1984, the City was one of the fastest growing communities in Southern California. However, the rapid increase in development in the City has had attendant side effects which make the need and desirability for a new comprehensive general plan all the more important.

B. Previous Planning Efforts

In 1962, the City of Signal Hill adopted its first General Plan. The Plan prepared by the firm of Simon Eisner and Associates included a consideration of population land use, circulation, parks and recreation, and civic facilities. In response to anticipated growth trends, the 1962 General Plan recommended intensive commercial,

industrial, and residential land uses. A considerable portion of the city, especially the southern and western sections were recommended for residential development. The emphasis was on multi-family development in the density range of between 20-30 units per acre, with some areas as high as 80 units per acre. These proposals were based on an anticipated population increase from 4,816 persons in 1962 to an ultimate population of approximately 24,000.

By 1970, however, Census data indicated that the City's population had increased to only 5,582. This lower than anticipated growth rate resulted in zone changes that allowed non-residential development in residentially zoned areas. Consequently, by 1974, several existing land uses were inconsistent with the land use designations originally proposed in 1962. Recognition of these inconsistent conditions as well as the desire to take advantage of the rapid metropolitan growth occurring around Signal Hill, led to the preparation of a new General Plan in 1974. The 1974 Plan included Land Use, Circulation, Scenic Highways, Community Facilities, Housing, Open Space, Conservation and Public Utilities elements. Plan policies were based on an estimated future population 23,095 persons, a figure four times greater than the estimated 1974 population. Growth was projected to occur over a 20 year period, with most of it taking place during the first five years following the Plan's adoption.

Despite a relatively detailed analysis of the physical characteristics of the City, including slope, soil and earthquake fault conditions, the 1974 plan was a major shift away from the 1962 recommendation for low density and medium multiple family density on the sloped portion of the "Hill" to development of these areas to high density residential areas.

C Need For A Revised Plan

Since 1974, accelerated growth in the City of Signal Hill largely a result of the City's 1974 General Plan recommendations, created significant public concern over the pronounced effects that many developments were having on the character of the City. The central issues included, but were not limited to growing population associated with increases in multiple family units and attendant side effects. Such side effects included:

-- overbuilt and overcrowded sites
-- traffic and lack of parking
-- lack of open space
-- lack of view
-- poor aesthetics of development.

In response to these concerns, the Planning Commission instituted a program to revise the Land Use Element of the General Plan in early 1984.

An initial community workshop was held. As the City began evaluating major community issues which surfaced at this workshop, it became apparent that it would be necessary to revise and reconstruct the entire General Plan. There were also additional reasons for revising the Plan. The Land Use, Circulation, Open Space, and Conservation Elements, adopted in 1974, were not consistent with State General Plan Law and State Guidelines for preparation of General Plans. In addition, various Elements such as Noise, Seismic Safety, Safety, and Housing were developed and/or amended independently of each other; and, as a consequence, the Plan lacked internal consistency. State law also recommended that the entire General Plan be reviewed at least every five years and revised, as necessary, to ensure internal consistency. As a result of these needs, the City Council authorized a program to undertake a comprehensive revision of the entire General Plan as part of the 1984-85 Budget process. The City Council also adopted a development moratorium over a portion of the City's multiple family area to allow the City to complete proposed General Plan Amendments and any subsequently needed Zoning Ordinance amendments.

III. Purpose And Intent

California State Law requires each City to adopt a comprehensive General Plan for the physical development of the City and any land outside its boundaries which bears a relationship to its planning activities. The Plan must consist of a diagram or diagrams and a text which sets forth the City's long range goals and objectives, as well as policies, standards and plan proposals. The General Plan must include the following eight mandated elements which may be combined at the discretion of the local jurisdiction:

-- Land Use
-- Circulation
-- Housing
-- Conservation
-- Open Space
-- Noise
-- Seismic Safety and
-- Safety.

The Signal Hill General Plan has been prepared in accordance with the requirements of State Law and addresses all issues and topics required. The Plan represents a determined effort to examine and synthesize trends which make Signal Hill what it is today. Even more importantly, it is an attempt to project and direct future growth and development in such a manner as to improve the quality of life for Signal Hill residents. Public involvement was a necessary ingredient throughout the entire planning process. In an effort to solicit citizen ideas and suggestions on the direction of the City's future development, several community workshops were held. Participants included residents, local businessmen, landowners, city officials and staff members. Through presentations, slide shows and group exercises, community concerns were identified, and public awareness of major planning issues was increased. Citizens were given the opportunity to evaluate alternative proposals, participate in the selection of the preferred alternatives and resolve any conflicting demands for community resources.

The real effectiveness of a City's General Plan is contingent upon the practical applicability of the Plan to changing priorities and conditions. It will be essential to monitor and reevaluate the validity of Plan policies and amend the Plan from time to time. State Law permits the Plan to be amended four times annually. It is also recommended that a comprehensive update be made of the Plan at least every five years.

IV. Plan Framework

State Law allows local governments to combine two or more elements, according to local needs and existing conditions. This was done in Signal Hill. Through the revision

process, the Open Space and Conservation Elements have been consolidated into an Environmental Resources Element, and the Seismic Safety and Safety Elements have been consolidated into a Safety Element. The General Plan document is now organized into seven chapters.

Chapter I	Introduction
Chapter II	Land Use
Chapter III	Housing
Chapter IV	Circulation
Chapter V	Environmental Resources
Chapter VI	Safety
Chapter VII	Noise

The presentation of each General Plan Element generally follows a similar organization:

-- Introduction
-- Background and Existing Conditions
-- Needs and Issues, Constraints
-- Goals, Objectives, and Policies
-- Implementations - Strategy and Program

This format allows those using the Plan to turn to the section that interests them and to quickly obtain a perspective on the City's policies on the subject. However, it is important for those using the Plan to realize that various Plan policies from one element to another are interelated and should be viewed comprehensively. Since Plan policies contained in each element are presented as both written statements and Policy Maps, it is also important that both text and Policy Maps be referred to when making planning decisions.

The General Plan is not a zoning map. The text and policy maps are intended to provide general, broad direction for long range planning and should be used as a policy guide only. The Zoning Ordinance, on the otherhand, is a specific implementation mechanism for classifying properties within the community into specific land use districts. The Zoning Map designation of these land use districts is accompanied by ordinance provisions which specifically identify development standards within each district. These development standards may control such items as the placement, height, bulk, density, and coverage of structures permitted on specific parcels. The intent of the Zoning Map and Zoning Ordinance is to carry out policies and programs identified in a community's General Plan.

V. DEFINITIONS

State Law refers to, but does not define or rank, "objectives," "policies," "principles", "standards", "plan proposals," and "programs" in the General Plan. The following set of definitions, arranged from the general to the specific, has been used in this General Plan.*

GOAL - The ultimate purpose of an effort stated in a way that is general in nature and immeasurable. Example: "To enhance the open-space amenities of the community."

POLICY - A specific statement guiding action and implying clear commitment. Example: "Recreational uses in wildlife refuges and nature preserves shall be limited to those activities which are compatible with maintaining the environment with a minimum of disruption, such as hiking or horseback riding." The objectives, principles, standards, and programs provide the definitive direction and guidance to implement the policy.

OBJECTIVE: - A measurable goal. Example: "To reduce peak-hour traffic congestion to service level 'C' by 1984."

PRINCIPLE - An assumption guiding plan proposals, standards, and implementation. Example: "A neighborhood is bounded by arterial streets which carry through-traffic and which are located so as to avoid unnecessary traffic within the neighborhood."

STANDARD - A specific, often quantified guideline defining the relationship between two or more variables. Standards can often directly translate into regulatory controls. Example: "Three to six dwelling units per net acre (low-density residential).

IMPLEMENTATION PROGRAM - An action, procedure, program, or technique that carries out General Plan policy. Example: "Develop a geologic hazard overlay zoning classification and apply it to all geologic hazard areas identified in the general plan."

*Definitions provided from the General Plan Guidelines, 1980, p. 10.

2/7/86

LAND USE ELEMENT
OF THE
SIGNAL HILL GENERAL PLAN

CITY OF SIGNAL HILL

2/7/86
Revised 3/89

Land Use Element of the Signal Hill General Plan

City of Signal Hill



March 1989

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I. INTRODUCTION

A. Purpose and Scope

Signal Hill's major resource is land. As a commodity, the City has more vacant land per capita than most neighboring cities. With close to one square mile of land potentially available for development, conscientious planning and sound development decisions which recognize the City's unique characteristics and opportunities will be needed.

The purpose of the Land Use Element is to serve as a long-range guide to the future development of the Signal Hill Planning Area. The Element consists of both diagrams and text establishing a pattern of public and private land use that is consistent with the values of the community. The Element also includes population density and building intensity standards for Land Use proposals in the Planning Area.

Signal Hill's revised Land Use Element is designed to provide maximum social, economic and environmental benefits for the City's residents through the planned distribution, location and intensity of land uses. The Element presents a background of planning historical data necessary to understand the current distribution of land uses within the City. The Element also identifies current land use needs, issues, and constraints confronting future development, establishes goals and policies, and identifies implementation programs to guide the growth of the community.

B. Legislative Authorization

The California Government Code requires all City and County General Plans to contain a Land Use Element as part of the required General Plan. The Element should promote a balanced and functional mix of land uses, guide public and private investment, reflect land use opportunities and constraints identified in other general plan elements, and reduce hazards.

More specifically, Section 65302(a) of the California Government Code identifies the required content of the Land Use Element as follows:

> "A land use element which designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall also identify areas covered by the plan which are subject to flooding and shall be reviewed annually with respect to such areas."

C. Relationship to Other Elements

The Land Use Element has been called the key element of any General Plan because it has the broadest scope of those mandated elements required in a General Plan. It was prepared with full knowledge and consideration of the information, policies, and programs contained in the Housing, Circulation and Infrastructure, Environmental Resource, Noise and Safety Elements of the General Plan. Thus, the Land Use Element plays a central role in synthesizing all General Plan issues, constraints and opportunities.

II. BACKGROUND AND EXISTING CONDITIONS

Gathering and evaluating data about the population, economic, land use and development trends in a city is an important step in formulating land use policies. This section of the Land Use Element provides a brief overview of those information items on Signal Hill.

A. Population Trends

The City of Signal Hill has experienced a relatively steady rate of population increase over the last several decades as shown in Table 1. Since 1960, population has increased at an average rate of approximately 130 persons per year, or an annual percentage increase of 2.8 percent. However, over one-half of the growth during this time frame has occurred in the last several years largely as a result of a residential construction surge between 1979 and 1981. A more detailed discussion of population characteristics can be found in the Housing Element.

An examination of the City's current population holding capacity is an important indicator in determining the long term effects of existing land use policies and whether policy changes may be necessary. Population holding capacity represents the maximum population that could result from unconstrained growth of all land within the City of the densities currently permitted in each residential zoning district. Assuming development of all the City at the highest permitted densities contained in the Zoning Code for each residential category, Signal Hill could potentially have an approximate population of 11,232 people living in approximately 5,327 dwelling units. This would result in a 33 percent increase in the City's present population, and a 40 percent increase in the current number of dwelling units.

TABLE 1

POPULATION TRENDS

	Signal Hill		Long Beach		Los Angeles County	
Year	Total	Annual Growth Rate	Total	Annual Growth Rate	Total	Annual Growth Rate
1940	3,184	--	164,271	---	2,785,043	--
1950	4,040	2.7	250,272	5.2	4,151,687	4.9
1960	4,627	1.5	344,168	3.8	6,038,771	4.5
1970	5,582	2.1	358,633	0.4	7,040,679	1.6
1980	5,734	0.3	361,334	0.1	7,477,657	0.6
1981	5,874	2.4	362,831	0.4	7,699,413	2.9
1982	6,255	6.5	368,300	1.5	7,630,500	0.9
1983	6,973	11.5	373,100	1.3	7,763,800	1.7
1984	7,345	5.3	376,034	0.8	7,861,344	1.3
1985-87	8,186	3.8	406,211	2.7	8,403,532	2.3
1988	8,080	-1.1	415,808	2.4	8,555,937	1.8
1989	8,423	4.2	--		--	

Source: U.S. Department of Commerce, Census Bureau, Signal Hill Department of Planning & Community Development, California State Department of Finance.

B. Economic Trends

Although most local economies are highly influenced by regional, state and national economic trends, an examination of more recent economic trends in Signal Hill can have an extremely important bearing on land use decisions.

1. Taxable Valuation

The taxable value of all property in Signal Hill has grown significantly over the last decade. In the same period the taxable value of property in Los Angeles County and Long Beach increased at a growth rate less than that of Signal Hill. The phenomenal growth in Signal Hill can be attributed to a combination of factors. These include

the unitization and construction of centralized oil drilling facilities during the 1970s, which released former oil fields for development, the City's location close to an existing urban center and the impacts of the City's own redevelopment efforts.

An examination of building permit records has indicated that the additional valuation added by building permit activity in the city since 1973 has primarily been been due to new residential construction and to a lesser degree due to industrial and commercial construction. Almost all new commercial and industrial building activities have occurred in the City's Redevelopment Project Area No. 1.

2. Retail Trade

Table 2 shows the number of retail permits and amount of taxable transactions in Signal Hill between 1980 and the second quarter of 1988. During this time frame the City gained 21 retail stores, or 18 percent of the 1980 total. From 1980 to 1987, the city recorded a 130 percent increase in taxable retail transaction representing $137 million dollars.

The number of "other outlets", which includes businesses whose primary sources of income may be wholesale, manufacturing, or servicing, increased by 6.5 percent over the 1980-88 period.

Combined totals for retail and other outlets in Table 2 show that there has been a substantial increase in the number of total sales over the 1980-1987 period, despite the decrease in the Consumer Price Index (CPI) for the same period. There was a net gain of 67 outlets and sales were up 65 percent.

Table 3 provides a comparison of the incremental change in permits and sales for the four year period between 1985-1987 in Signal Hill, Long Beach, Los Angeles County, and the State. As the table makes clear, Signal Hill has had a much better time economically than have the larger jurisdictions. Signal Hill dealt with the recession better, in general, than the County and State. This has a direct impact on the City, which receives an amount equal to 1 percent of retail sales made in the City from the state. Increased sales by city merchants increases the revenues of the City.

TABLE 2

RETAIL PERMITS AND TAXABLE TRANSACTIONS
(Taxable Transactions in Thousands)

	Retail Stores		Other Outlets		Total Outlets	
Year	Permits	Transactions	Permits	Transactions	Permits	Transactions
1980	115	$105,043	510	$123,616	625	$228,659
1981	114	114,814	515	153,575	629	268,389
1982	112	113,502	520	123,473	632	236,975
1983	106	128,282	521	104,324	627	232,606
1984	117	146,986	548	119,749	665	266,735
1985	114	148,285	546	139,720	660	288,005
1986	118	174,668	563	135,086	681	309,754
1987	128	241,855	564	135,353	692	377,208
1988[a]	136	65,109	543	40,729	679	105,838

a As of the second quarter of 1988.

Source: Statistical Research and Consulting Division, State Board of Equalization, and Economics Research Associates.

TABLE 3

CHANGE IN RETAIL PERMITS AND TAXABLE TRANSACTIONS, 1985-1987
SIGNAL HILL, LONG BEACH, LOS ANGELES COUNTY, CALIFORNIA
(Taxable Transactions in Thousands)

	Signal Hill	Long Beach	Los Angeles County	California
RETAIL STORES				
Permits				
Number	14	114	4,460	22,613
Percent	12.0	3.6	6.2	9.2
Taxable Transactions				
Amount	$93,570	$90,270	$2,934,390	$9,392,002
Percent	63.1	6.0	7.3	6.9
OTHER OUTLETS				
Permits				
Number	18	546	9,617	24,634
Percent	3.3	10.9	6.5	5.3
Taxable Transactions				
Amount	($4,367)	$73,663	$2,014,516	$6,302,113
Percent	(3.1)	10.2	10.6	9.9
TOTAL OUTLETS				
Permits				
Number	32	659	15,591	110,981
Percent	4.8	(8.0)	6.3	6.8
Taxable Transactions				
Amount	$89,203	$163,933	$5,428,476	$17,357,786
Percent	31.0	7.4	8.8	8.3

Source: Statistical Research and Consulting Division, State Board of Equalization; and Economics Research Associates.

Note: Figures in parenthesis are negative changes.

The City's share of retail sales in Los Angeles County continues to rise, and the average retail sales per capita in Signal Hill continues to exceed comparable figures for the County and for Long Beach (see Table 4). This is due to two unique factors: the City's small population, and the regional nature of city sales. In fact, approximately 90% of the City's taxable purchases are made by nonresidents. Opportunities for meeting residents' needs particularly for general merchandise, apparel, drug stores and for eating and drinking establishments are also indicated in information provided by the State Board of Equalization (see Appendix A). To maximize these opportunities and to improve the City's share of the sales tax, the City and Redevelopment Agency are negotiating for development of a number of commercial developments in the City including a commercial shopping center in the City's Town Center, and a proposed Auto Center Project.

TABLE 4

COMPARISONS OF RETAIL SALES PER CAPITA
1980-1987

Year	Signal Hill	Long Beach	Los Angeles County
1980	$18,319	$4,643	$4,445
1981	19,546	4,990	4,791
1982	18,145	4,599	4,962
1983	18,397	4,954	5,393
1984	20,012	5,263	6,051
1985	19,180	3,875	4,944
1986	21,784	3,773	5,005
1987	29,545	3,927	5,108

Source: State Board of Equalization; Economic Research Associates

In 1987, the top ten sales tax producing firms in the City, representing approximately 58 percent of the total annual sales in the City, included Eastman, Inc., Price Club, Gaines Electric, Beach City Chevrolet, A & A Ready Mix Concrete, Universal Mack/ Sales, A.L.L. Roofing, Target Store, A-One Home Appliance, and Petrolane Transport (see Appendix B). In 1988, the top sales tax producing firms included Price Club, Eastman, Inc., Target Stores (formerly GEMCO), and Beach City Chevrolet.

3. Employment

Signal Hill has an unusually large employment base for a City of its size. Business license information for 1984 indicates the presence of at least 836 reported businesses, with a total employment of 7,588 persons. This compares to only 271 businesses in 1973. While the oil industry has historically provided a majority of the City's employment, a growing variety of retail and wholesale sales and service, manufacturers and processors, and professional and semi-professional related industries can be found in the City as a result of new industrial development. Based on business license information, the largest employers (both manufacturing and nonmanufacturing jobs) in the City are:

- Pacific Valve
- General Telephone
- Eastman, Inc.
- Price Club
- Petrolane Gas, Inc.
- GEMCO
- Willis Oil Tool Company
- Hawk Industries
- Ofcco Construction
- Oil Well Service Company
- Page Oil Tools

Business license records are generally a very conservative estimate of employment since businesses tend to under report required information.

4. Redevelopment Efforts

To further promote a sound and diversified economic base and to eliminate blight and environmental deficiencies, the City of Signal Hill adopted Redevelopment Project Area No. 1 in July 1974. The Project Area consists of approximately 799 acres, or 61 percent of the City's total land area and is located south of the San Diego Freeway (see Figure 1). The Project Area generally excludes the City's older residential areas north of the freeway and the southerly and southwesterly portions

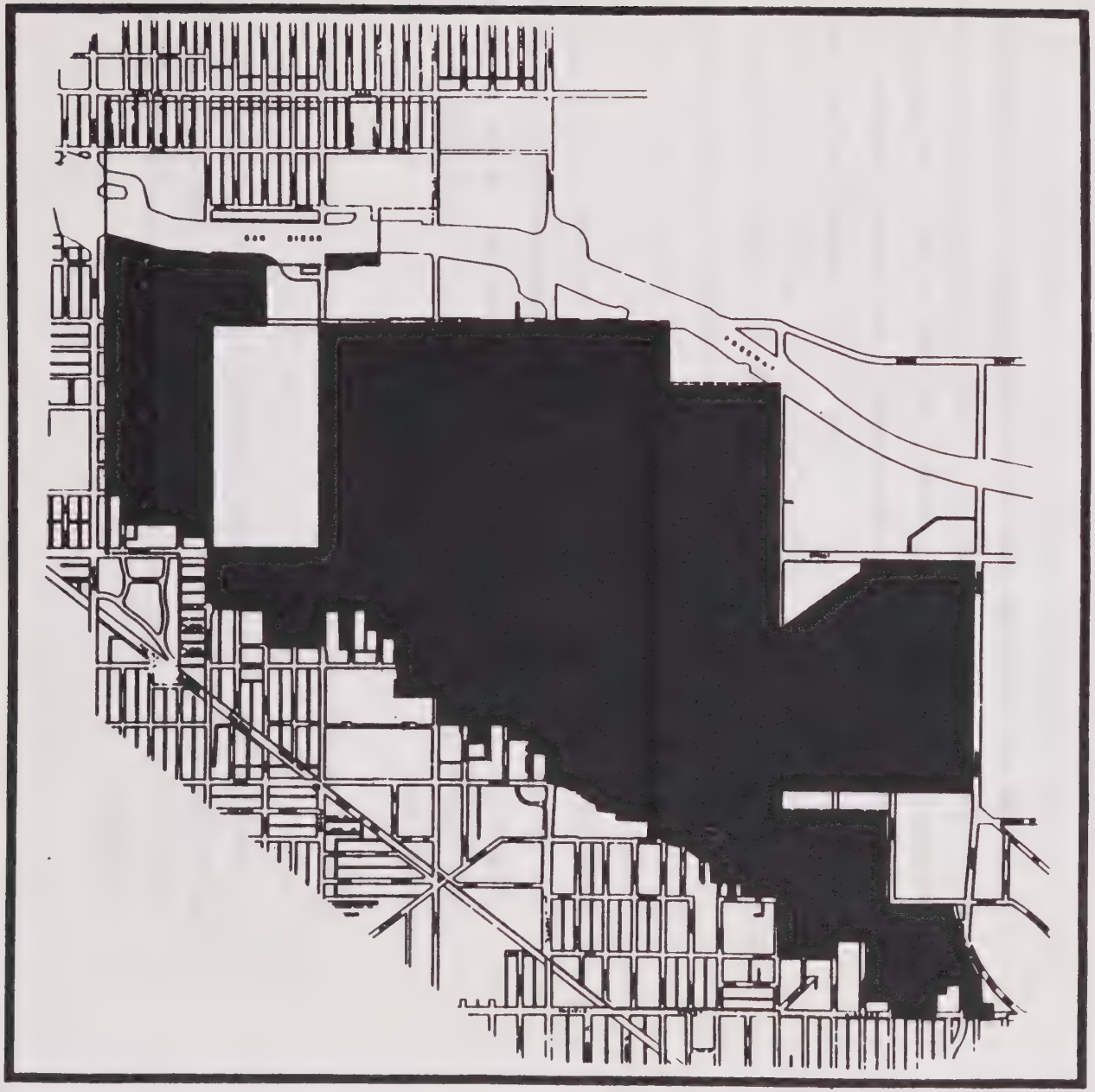


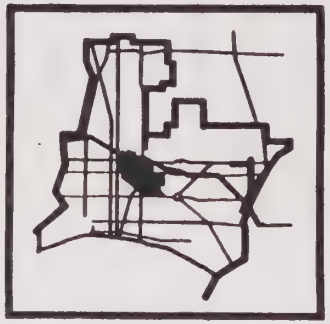
FIGURE 1

LEGEND

KEY

REDEVELOPMENT PROJECT AREA NO. 1

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of the City. It is bounded on the west and east by the City limits. The redevelopment plan allows for residential, commercial, industrial, and public land uses, encouraging private investment in industry, commerce, and housing. Such investments will improve the City's economic base through an increased tax base and employment opportunities.

A modest amount of privately sponsored residential, as well as commercial and industrial developments has occurred each year in the project area since adoption of the redevelopment plan. In addition to the nearly 800 housing units that have been constructed in the project area, with development values of approximately $42 million, an additional $40 million of commercial and industrial projects have been completed.

As an incentive to private development, the Agency has also undertaken a substantial public improvement program in an effort to upgrade the area and serve new development. To date, in excess of $40 million have been spent on these improvements. The program has sought to address deficiencies in the water and sewer system, storm drainage facilities, streets (including sidewalks, curbs, gutters, traffic signals, median islands, street lights, and the undergrounding of overhead utility lines), parks, and municipal facilities.

C. Land Use

A review of land use changes during the past 15 years indicates definite trends of growth and development in residential, commercial, and industrial land use categories. However, comparison with earlier years is not possible since land formerly designated as vacant or open space have been reclassified to other land use categories.

1. Residential Uses

In January 1988, there were 3,586 dwelling units within Signal Hill. Single-family units comprised approximately 38 percent of the housing stock; two to four housing units made up 20 percent and multiple-family developments with five or more units, 42 percent.

The 1989 estimate of housing units in the city is 3,816. Approximately 20 percent of the city's land area is developed with residential land uses.

There are three major concentrations of residential uses in Signal Hill: north of 33rd Street; southeast of Cherry Avenue and 23rd Street; and the southwest area west of Cherry Avenue and south of Burnett Street. Growth in recent years has primarily occurred between Cherry and Temple, Willow, and 19th. Appendix C provides an graphic illustration of residential densities by City block.

2. Commercial Uses

Commercial uses in Signal Hill cover approximately 10 percent of the City's total net land use acreage. While there has been limited growth in retail land uses since 1974, the most dramatic trend during the period was the substantial increase in office commercial uses. Over 465,000 square feet of office space was built between 1974 and 1987. Based on a review of historical trends and the regional office market, it is anticipated that the City will continue to capture approximately 20,000 to 25,000 square feet of office space annually.

Retail commercial activities in Signal Hill are primarily distributed along major highways, including Pacific Coast Highway, Cherry Avenue, and Willow Street. The City is undertaking a redevelopment effort to create a Town Center at the intersection of Cherry Avenue and Willow Street, which will focus commercial activity in the City. Development of major retail commercial uses at this location is planned, as well as other commercial activities. An Auto Center project is also proposed at Cherry Avenue and Spring Street.

3. Industrial Uses

Approximately 25 percent of the City's land area is currently committed to industrial uses. Between 1974 and 1987, developed industrial acreage in Signal Hill increased from 176 acres to 288 acres, an average of 8 acres per year. The average annual construction of industrial space between 1974 and 1984 was approximately 110,000 square feet.

In Signal Hill, the main concentration of industrial uses exists north of Willow between Orange and Temple. Smaller concentrations are located in the southwest, east, and southeast portions of the City. The City's industrial space is a mixture of office and industrial complexes with floor areas less than 15,000 square feet in each freestanding building; 30,000 to 50,000 square foot owner-occupied complexes, and newer business parks built within the last 10 years which have an average floor area of approximately 50,000 square feet in size and which attract small commercial and manufacturing oriented tenants.

4. Quasi-Public and Public Uses

Six percent of the City's total land area is currently devoted to parks, open space, and public uses. Uses in this category include schools, government facilities, parks, and other uses dedicated to passive and active recreation.

The largest concentration of public uses are located adjacent to Hill Street, the City's Civic Center area, where several major City buildings are found. These facilities include the City Hall, the Police Station, Library, Community Center, and Chamber of Commerce. Hinshaw Park serves as the central open space for public facilities within the Civic Center and includes citywide recreational facilities, such as a band shell, softball field, basketball court, and picnic tables.

While Hinshaw Park serves a citywide need by providing a variety of passive and active recreational opportunities, Reservoir Park in the northern portion of the City provides passive neighborhood recreational facilities and a tot play lot. Millbrook Park is a neighborhood mini-park in the southeasterly portion of the City, and has a unique water feature.

The Long Beach Unified School District has two elementary schools within the Signal Hill Planning Area; Signal Hill Elementary (southwest corner of 23rd and Walnut) and Burroughs Elementary (southeast corner of 33rd and Orange Avenue). District operated junior-high and high schools attended by Signal hill residents are located outside City boundaries. Public school playgrounds are available for public use but access is limited and playgrounds are not supervised.

D. Zoning/Land Use Utilization

Of the total land area in the City, approximately 30 percent is zoned for residential use. Of the remaining land, 16 percent is zoned for commercial use, 31 percent for industrial use, and 2.4 percent for open space. Overall, 51 percent of the city is developed to its intended uses. This relatively low rate of land use utilization in many zones is partially explainable by the large amount of vacant land in the City which remains undeveloped due to a variety of development constraints, such as the lack of necessary infrastructure, poor topography, soil conditions, and continued oil production activities.

E. Urban Design Setting

Urban design concentrates on the natural and man-made physical features that determine the structure and image of the City. As shown on Figure 2, these features include edges or barriers, portals or entry points, major land use patterns, vistas, and activity centers.

1. Edges and Barriers

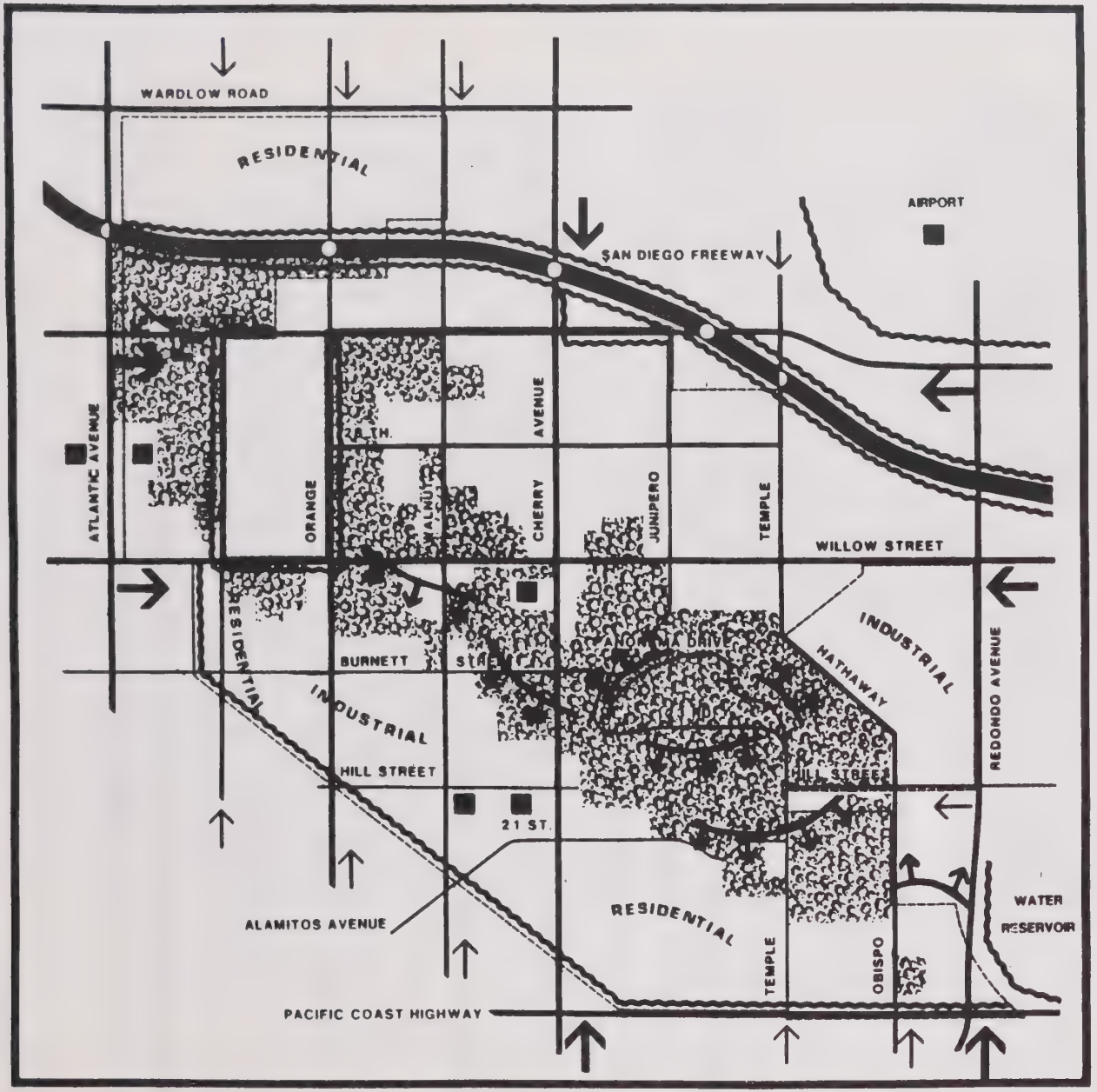
Edges or barriers are visual boundaries. They are linear elements that create breaks in landform continuity or physical features that separate different regions in the City. Edges and barriers, both natural and man-made, blend together to create the character of the community.

Major edges or barriers in or immediately adjacent to the Signal Hill planning area include "The Hill" which rises above the surrounding area, the San Diego Freeway, the Southern Pacific Railroad right-of-way, Pacific Coast Highway, the Long Beach Cemetery, and various heavy industrial plant operations to the north. To the northeast, the Long Beach Airport and the Long Beach Water Reservoir to the southeast form additional edges adjacent to Signal Hill.

2. Portals and Entry Points

Portals or entry points are gateways to a City. Distinctive elements, such as pylons, street signage, medians, parks, or special landscaping may be used at these points to

Figure 2



URBAN DESIGN FEATURES

LEGEND

KEY

- VACANT AND OIL PRODUCING LAND
- PRIMARY ENTRY
- SECONDARY ENTRY
- BARRIER/EDGE
- ACTIVITY CENTER
- VISTA

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emphasize an entrance to the City, and to differentiate the City of Signal Hill from the City of Long Beach. Although many portals or entry points to the City are not distinguishable from Long Beach, the City has recently made an effort to begin identifying the City.

A "river rock" theme with medians accented by palm trees, flowers, and signage all form a cohesive entry into Signal Hill along Willow Street. The entries to the City are marked with low pylons identifying the "City of Signal Hill". A theme wall recently constructed along Cherry Avenue south of 2nd Street to the City's southerly boundary is an attempt to create an entry element, as is Millbrook Park on Wall Street.

3. Major Land Use Patterns

Although existing land uses patterns in the City have been impacted by edges and barriers, activities associated with the oil industry and continued petroleum production activities have also significantly impacted the City's development patterns. Residential areas are generally located north of the freeway, and south of the "Hill". Industrial areas are located in the northern and eastern portions of the City and scattered throughout the southwest and southern portions of the City with a mixed pattern of residential and industrial uses to the southwest.

4. Vistas

One of Signal Hill's greatest assets is its tremendous view opportunities. From the top of the hill a complete 360 degree panorama can be enjoyed, a unique Southern California experience. Other vantage points in the City also provide dramatic vistas to the south, southwest, and northeast. The best views from the hill are toward the south and southwest. Looking toward the ocean, one can view the bustling activity of Long Beach, the San Pedro and Long Beach Harbors, and Santa Catalina Island on the distant horizon. The second best views are to the northeast, primarily focusing upon the Long Beach Airport and the back drop of the San Gabriel and San Bernardino mountains. Visual enjoyment can be derived from viewing arrivals and departures of the airplanes.

5. Activity Centers

Activity centers are strategic areas of a City that are the focus for a community. These areas may include a combination of uses such as a civic center, retail uses, and or a commercial downtown. Within Signal Hill, the Civic Center forms the primary focus of community activity. Major facilities and activity uses located along Hill Street include the City Hall, Police Headquarters, Library, and the Petrolane Corporate Headquarters. Other activity centers in the City can be found in proximity to the Town Center at Cherry Avenue and Willow Street and adjacent to Atlantic Boulevard in the vicinity of Long Beach Memorial Hospital. Activity centers located in Long Beach which have impacts on Signal Hill include Long Beach Airport, the Long Beach Postal facility along Redondo Avenue, and Long Beach Memorial Hospital.

III. NEEDS, ISSUES AND CONSTRAINTS

A. Introduction

The preceding section of this element evaluated population, economic, land use, and development trends in Signal Hill in order to provide a policy guide for future development. These existing conditions must be combined with land use needs and issues, as well as issues identified in other elements of the general plan.

Once needs and issues are identified, an examination of constraints is necessary to determine if needs and issues can or should be met. In the case of the land use element, the treatment of constraints is primarily related to those natural and man-made physical constraints which determine the suitability or compatibility of certain areas of the City for development. Constraints are, therefore, extremely important in the land use element and will play a major role in defining land use policy and standards.

B. Needs and Issues

The following needs and issues have been identified through evaluation of existing conditions and through community workshops on the general plan. Certain issues are of regional and city wide importance, while others may only apply to particular portions of the City.

A. Reduce Residential Densities and Create a Balance of Residential Uses

Residential density is a predominate concern in Signal Hill. The primary reason for establishing areas of varying densities within the City is to provide a range of housing types which meet the varying needs of the community. Another important consideration in determining densities for certain areas within the City include the capacities of public utility infrastructures, the impacts on local traffic, the availability of public services and the existing natural and man-made conditions affecting portions of the City.

Prior to 1986, there were only 2-1/2 blocks within the City zoned for single-family residential development. However, there was a significant amount of land that was zoned for multliple-family development far in excess of realistic year 2000 growth projections and unreflective of existing development patterns and environmental constraints. As a result, a 1986 general plan amendment identified a strong need to establish an orderly, balanced residential pattern of growth. This required close reexamination of densities and land use patterns in the City with particular attention to setting land use and zoning categories which reflected reasonable and achievable development patterns, given environmental infrastructure constraints and the desire that new development be compatible with existing neighborhoods.

2. Manage Scenic and Hillside Areas

Signal Hill's small town image has largely been defined by its natural environmental features. These major features include the hillsides and expansive private open spaces between Redondo Street, Willow Street, Cherry Avenue, and north of Alamitos Avenue. These areas not only provide significant visual relief within a largely urban environment but also offer dramatic panoramic views. While many vantage points are currently on private property, it is desirable to preserve public viewsheds whenever possible. Since numerous development constraints make a majority of these hillside areas inappropriate for high density development, methods to enhance and preserve the environmental features of these areas should be undertaken, whenever possible, to reinforce the City's small town character. Uses envisioned as appropriate would be lower density, clustered developments which, as much as possible, keep the severely sloped areas in their natural condition, reinforce a low profile building scale, and emphasize the creation of greenbelt opportunities.

3. Improve Quality of Development

Past development has largely occurred in response to market conditions. The piecemeal fashion in which past development occurred, along with inadequate development and design controls, resulted in development which did not enhance the image of Signal Hill. While it is important to recognize the need for developers to receive financial rewards for their efforts, it should also be the community's responsibility to ensure high quality development. The revision of the City's development standards for new construction in all zones, continued implementation

of the City's site plan and design review procedures and establishment of more detailed design guidelines for achieving quality in private and public developments should be emphasized. In addition, a clear definition of major entry points into the City also would dramatically improve the City's image.

4. Revitalize Older Commercial, Industrial, and Residential Areas

The City's older commercial, industrial, and residential areas are beginning to show signs of degeneration as evidenced by their age, lack of maintenance, the obsolescence of certain infrastructure systems, and the lack of other amenities that reduce the quality of life for residents and businesses in the community. Deteriorated conditions detract from the image of the City and can significantly lower property values. Public and private resources should be mobilized to upgrade physical and business environments in these older areas.

Special attention should be placed on older residential areas which need maintenance and upgrading to continue to provide adequate accommodation for residents. The City should also monitor strip commercial development along Pacific Coast Highway, Cherry Avenue, and Wardlow Road. These areas generally lack identity and are characterized by many marginal businesses, poor aesthetics, and parking and circulation problems.

5. Expand and Diversify the City's Economic Base

Like other public agencies, the City of Signal Hill's fiscal capacity was significantly affected by Proposition 13 and Proposition 4. The City in the past relied heavily on revenues associated with the oil industry. Variations in the economy, as well as declining oil reserves have reduced the stability of this revenue source. While local revenues are beginning to reach their limit, the costs of public service remain sensitive to inflation, growth pressures, state and federal mandates, and the demands of community interests. Given the City's uncertainty about future revenue sources, it is essential that the City expand and diversify its economic base to ensure a stable future revenue source.

Continued emphasis should be placed on attracting major sales tax generating uses, as well as smaller retail and service businesses. Development of the Commercial

Town Center at Cherry Avenue and Willow Street will be a primary tool in reinforcing a retail core in the City and in stimulating private investments elsewhere in the City. The proposed Auto Center project also represents a significant revenue source.

6. Improve Interface Between Different and Incompatible Uses

Incompatible uses and buildings can adversely impact a neighborhood. The impact is generally greater when different or incompatible land uses are near or in proximity to a residential or other sensitive use. In Signal Hill there are several areas, particularly in the southwest portion of the City, where a high concentration of nonconforming uses exists. Even where uses conform to City codes, existing manufacturing zones may directly abut residential zones. Special attention is needed in these areas to ensure adequate buffering between different uses and to gradually abate incompatible or dangerous nonconforming uses. Living conditions can be improved, property values maintained, and the integrity of neighborhoods preserved through sensitive land use controls. The City should also examine locations where mixed land uses could be compatible and could provide a stimulation to the revitalization of an area.

Another significant issue in Signal Hill is the interface between existing oil production activities and urban development. While existing oil production activities should continue to be a permitted use in any zone in the City, there will need to be a concerted effort to coordinate these activities with urban uses to ensure continued access for production activities and minimize the environmental impacts on adjacent urban uses.

7. Provide and Maintain Adequate Public Facilities

The City and a variety of special districts are responsible for providing public services and facilities. This includes a transportation and circulation system to allow the efficient movement of people and goods; a variety of utilities (i.e. water, electricity, etc.), fire and police protection, educational facilities, and cultural and recreational opportunities. In addition to coordination with outside agencies and districts, the City will need to examine funding alternatives to maintain the current levels and quality of services. In particular, revenues of the City's General Fund must be augmented appropriately whenever major residential expansion, which increases the demand for public services and facilities, is approved. Capital projects, in many cases may have to be handled on a "pay as you go" basis. In addition, essential services and facilities may have to be provided at the developer's cost in conjunction with development.

handled on a "pay as you go" basis. In addition, essential services and facilities may have to be provided at the developer's cost in conjunction with development.

8. Minimize Risks to Public Health and Safety

One of the purposes of the revised general plan is to bring safety considerations into focus as an integral component of the planning process. Natural and man-made hazards of some kind and degree are always present. However, once they are identified and their impacts evaluated, plans, standards, and contingencies should be undertaken to try and mitigate the consequences of known hazards. While significant attention has been given to this need in the safety and environmental resources elements, land use decisions can also play a significant role in minimizing risk to life, personal safety, and property from both natural and man-made hazards.

9. Establish Logical City Boundaries

A difficult issue which affects planning in both Signal Hill and Long Beach is that of irregular city boundaries. The present boundaries of Signal Hill are almost exactly the same as those which were established by the incorporation of the City in April 14, 1924. At that time, it was thought desirable to include within the City only those portions of the revenue-producing oil field. Streets and street frontages, especially those in the north and northwestern part of town were excluded from Signal Hill in order to avoid the cost of street maintenance and upkeep. As a result present City boundaries are set back for 55 to 70 feet along Wardlow Road and 90 to 100 feet east of Atlantic Avenue. In both instances lots have been divided so that portions of a single lot, including buildings, may be in both Signal Hill and Long Beach.

The problems created by these irregular boundaries are primarily administrative. For instance, when a developer proposes a project on a lot which is divided in each city, the plans must be approved by both Long Beach and Signal Hill. This means a duplication of effort by several departments in both cities and sometimes considerable frustration for the developer who must deal with different zoning regulations in each city. Problems also arise concerning the provision of police and fire, utilities, and sewer services and the distribution of sales taxes derived from divided properties.

C. Constraints

As part of the planning process, the identification of barriers, or constraints which might affect future development is necessary. The identification of constraints in the land use element is essential to ultimately determine the appropriate patterns, types and intensities of land uses that will be designated in the City's land use plan. While a variety of development issues and constraints are specifically discussed in the environmental resources, housing, safety, circulation, and noise elements, the following is a short outline of major environmental and man-made constraints which might affect future development in Signal Hill. Environmental constraints are those conditions that occur naturally and include such issues as slope and soil characteristics, and geologic and seismic considerations. Man-made constraints include all processes and conditions which are created or controlled by man and his activities such as traffic conditions, noise, public facility and service limitations, air quality, and petroleum production. A number of the major constraints discussed below are shown on Figure 3.

1. Flooding

While excess storm waters are not a significant problem in the City due to topography and the existing system of facilities, there are localized drainage problems. As development takes place in these areas, drainage problems will have to be addressed.

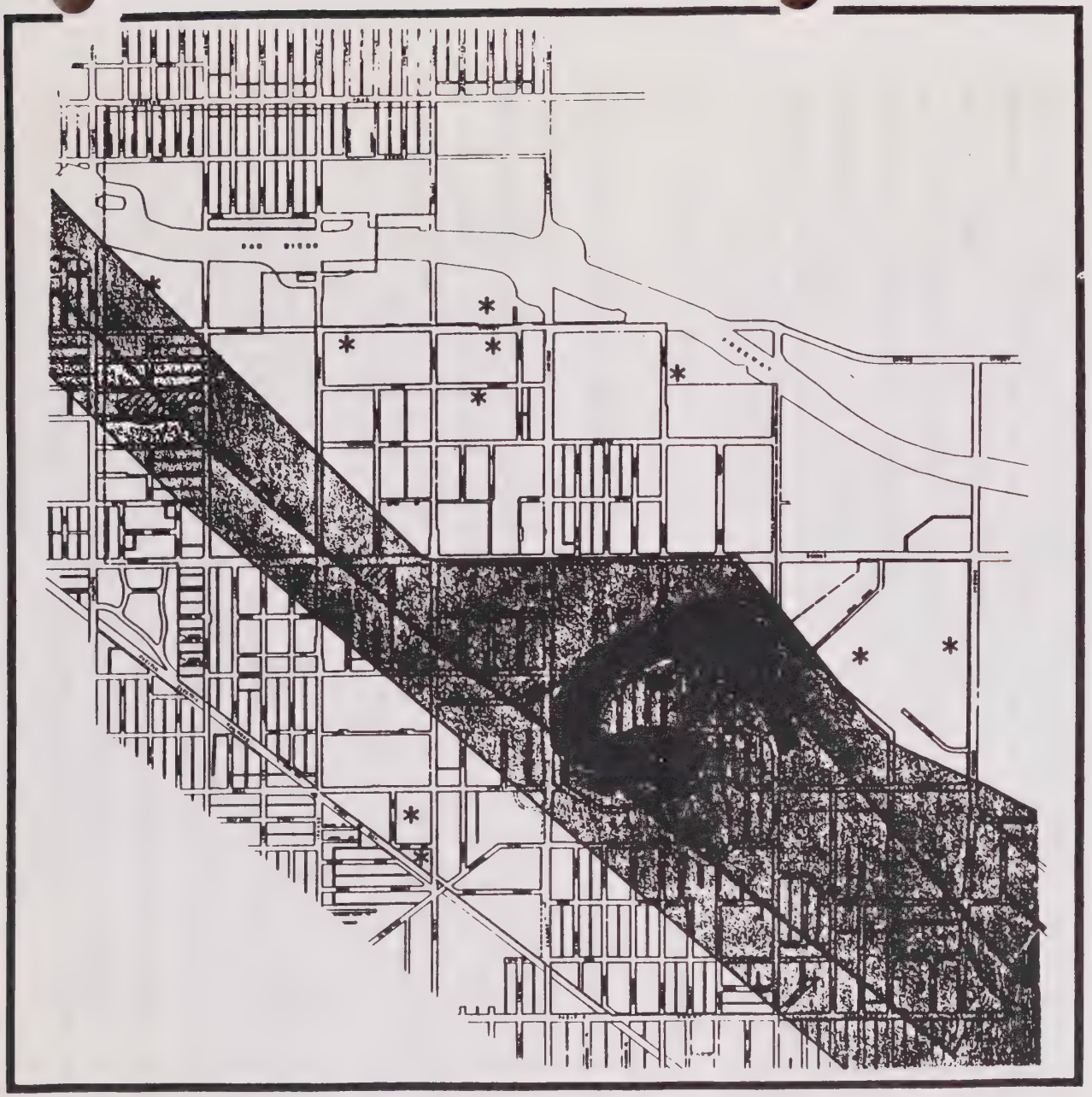
2. Slope and Soil Constraints

Development in Signal Hill is influenced by steep slopes on the Hill and along the ridge separating the upland and lowland areas. Potential hazards associated with slope development include landslide and erosion problems. Insensitive and excessive development in these sloped areas can substantially increase erosion and soil instability by changing the natural drainage pattern of the slope.

The Hill's major slopes extend southwest, to the intersection of 21st Street and Cherry Avenue, and to the north, terminating near Hathaway Drive in the northeast. While portions of the hill are not uniform in slope, the southern and

Figure 3

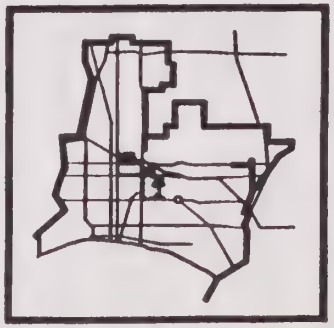
DEVELOPMENT CONSTRAINTS



LEGEND

- Estimated location of unstable soil areas.
- Estimated location of Alquist- Priolo special studies boundary zone
- Estimated location of surface trace faults
- Major petroleum facility
- Estimated location of slopes > 20%

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southwestern faces of the hill are the most steep, averaging a 40 percent slope with some areas approaching 80 percent slope. According to the United States Geological Survey, slopes above 25 percent are considered unstable and developable only under close scrutiny and control.

The degree of slope is a factor affecting soil stability. Another major factor is soil cohesiveness. The water content of the soil, impacted by climate and landscaping, can strengthen or weaken the soil. Expansive soils absorb water and increase in volume in varying degrees. There are localized pockets of expansive soils in the lowland areas in the northern portion of the City and in hillside areas. Development in these areas will require special building design and construction.

A primary development constraint that exists in portions of the City is soil contamination caused by petroleum production. Poor soil conditions exist where soil and crude oil by products have mixed or where sumps were dug or diked in the past by oil companies and then improperly abandoned. These areas exhibit weak bearing capacity and poor water drainage. The excavation of contaminated soil and the addition of new compacted soils must occur before any new structures are erected. There are many dumps scattered throughout the City, with concentrations existing in vacant land areas adjacent to existing or historical oil production areas.

3. Geologic and Seismic Constraints

The Newport-Inglewood fault system cuts diagonally across the City of Signal Hill and is considered seismically active. Areas within the seismic zone need to be analyzed for recent displacement prior to development. In addition, all construction must comply with earthquake resistant construction specifications promulgated by the State. Where surface fracturing is discovered, a buffer open space area generally must be provided adjacent to the fault subject to state requirements.

The primary hazards associated with seismic activity are surface rupture, ground shaking, and slope failures. Depending on the intensity and duration of an earthquake, these hazards could cause considerable damage to the City.

4. Noise Impact Areas

The noise element defines a variety of noise sources in Signal Hill. However, the most common source of noise are traffic, aircraft overflight, and industrial and oil production operations. Depending upon the extent of noise impact, it may be appropriate to designate areas subject to noise impacts which require mitigation when new construction occurs.

5. Air Quality

The climatological conditions found in Signal Hill are similar in nature to those in other coastal areas located within the South Coast Air Basin. Excessive concentrations of air pollutants can be typically found adjacent to major transportation corridors. These excessive concentrations occur on a temporary basis and are associated with traffic volumes and climatic conditions. There may also be occasional citywide experiences of unacceptable air quality. These occurrences are generally the result of specific episodes occurring exclusively within the City. Mitigation can be partially handled through land use decisions, such as locating sensitive uses in areas of least exposure to pollutants and by establishing a land use pattern which minimizes vehicular trips and which limits the creation of pollution generating sources.

6. Public Facility and Service Limitations

While the Long Beach Gas Company, General Telephone and Southern California Edison Company indicate that their facilities are generally adequate to serve any of the future growth alternatives examined by the City, there are existing deficiencies in municipal services. Present areas of concern include deficiencies in sanitary sewers, water supply distribution facilities, storm drains, and other related facilities. Current and projected deficiencies are generally a result of recent growth and development occurring in the City. Limited public financial resources will constitute the largest single constraint affecting the City's ability to provide a consistent level of public facilities and services over an extended period of time. It will, therefore, be necessary for the City to require installation and maintenance of improvements through private sector financing and to encourage development in areas where adequate public facilities already exist or in areas where existing facilities are underutilized.

A majority of Signal Hill children will attend schools within the Long Beach Unified School District. Since the District is currently indicating an overcrowded condition, lower residential densities would significantly reduce the potential impact on the District. Additional mitigation measures to insure the provision of adequate school facilities, however, may also be needed.

7. Traffic and Circulation

Traffic and local circulation constraints may affect the potential to develop the vacant areas of the City. The constraint is generally a financial one when access to development sites is limited or substandard, thereby requiring substantial developer investment. Access to hillside areas or steeply sloped areas may be technically infeasible. Conversely, some types of development may generate traffic volumes beyond the design capacities of the City's existing circulation system. The circulation and infrastructure element and the city's land use policy map identify the following major areas where new development may be impacted by traffic or circulation constraints.

Hilltop: The existing circulation system in this area dates back to the 1920s and needs updating. The Hilltop Specific Plan recommended certain revisions to the street pattern which would be implemented concurrent with the development of the hilltop area.

Hillsides: The topography of hillsides located on the north, south, and east flanks of the hill may limit the feasibility of constructing standard roadways without severely disrupting the integrity and character of the hill. Development of access roads in these hillside areas must be handled very sensitively.

Atlantic Avenue Corridor: The oil field area located east of Atlantic Avenue, west of California Avenue, between Spring Street on the north and 27th Street on the south contains a grid pattern of substandard and dilapidated streets. Reexamination of circulation and access patterns within the area is necessary to remove existing impediments to future commercial development.

nd

Willow Street and Orange Avenue Corridor: Future commercial development of vacant and redeveloped sites along Willow Street and Orange Avenue will contribute to the existing traffic congestion. Unacceptable traffic conditions may limit the intensity and type of development possible unless mitigation measures are implemented.

Street Capacities: There are seven roadway segments in the City which are expected to operate at or over daily capacity in year 2000. These roadway segments include:

- Willow Street, east of Cherry Avenue
- Spring Street, east of Walnut Avenue
- Spring Street, east of Cherry Avenue
- Pacific Coast Highway, west of Temple Avenue
- Cherry Avenue, north of Spring Street
- Cherry Avenue, south of Spring Street
- Cherry Avenue, south of Willow Street

The Willow Street deficiency can generally be mitigated by implementation of additional turning lanes at the Cherry Avenue intersection. Improvements in capacities for Spring Street and Cherry Avenue can also be mitigated by implementing intersection turn lane improvements and by restricting on-street parking to provide six travel lanes. Depending on the pace of development, implementation of a variety of possible mitigation measures will be necessary. Traffic conditions should be monitored on a regular basis. Analysis of trend data will enable the City to anticipate and mitigate problems before they become acute.

8. Petroleum Production Activities

Urban development occurring in close proximity to oilfield activities will be constrained by fire safety and access requirements as defined by fire department officials and oilfield operators. The fire department requires that new buildings be setback from active oil wells or petroleum storage tanks at an adequate distance for life and property protection. The orientation of a building on a site including the type of construction and the location of openings in building walls are influenced by fire department requirements for developments occurring in proximity to oilfield activities.

Oilfield operators, to the degree that they control surface areas (either through direct ownership or leasehold interests), can impose limitations on the intensity and location of development. When development occurs near oil production users, access can be indirectly restricted resulting in more complicated and costly production. Additional costs not only relate to restricted access but to additional liabilities that can result when production activities are close to urban uses. For example, when an oil service rig overturns, there are noise and traffic impacts and the potential for oil spills or oil spray.

Conversely, technological and resource management improvements have reduced oil well access requirements and have resulted in development occurring adjacent to production areas with little or no adverse impacts. Successful development of oilfield areas will require careful site planning and active cooperation between developers, oil operators, the fire department and City officials. Proper site planning can ensure the preservation of access to valuable resource recovery operations.

IV. ALTERNATIVE GROWTH CONCEPTS

Year 2000 growth alternatives were prepared as a basis for updating the current General Plan and developing goals and policies. In formulating these growth alternatives, three basic dimensions were considered: population levels, housing growth, and increases in commercial and industrial development. The primary role of reviewing growth alternatives was to establish a framework for decision making related to growth so that a viable and desirable distribution of land uses and other related systems could be achieved. Since major community concerns focused on a desire to reduce future population growth in the City, a significant amount of time was spent defining population growth alternatives which would achieve this public purpose.

The following growth rates contained in Table 5 were discussed at public workshops, and are provided here as background. Each of the alternatives provided the basis for meaningful discussion of major issues currently facing the City. They also were used to suggest a variety of policy directions or choices that were available, including trade-offs that would be in the best interests of the community. The preferred policy direction based on the input of the majority of workshop participants, the Planning Commission and City Council was to follow a course of action that was consistent with the moderate growth alternative, alternative "B".

TABLE 5

A COMPARISON OF YEAR 2000 GROWTH PROJECTIONS[a]

Type of Use	1983 Existing			Low A Increase From 1984-2000			Moderate B Increase From 1984-2000			High C Increase From 1984-2000		
	Acres	Dwelling Units	Estimated Population	Dwelling Units	Total Population	Annual Percent Increase	Dwelling Units	Total Population	Annual Percent Increase	Dwelling Units	Total Population	Annual Percent Increase
Residential												
Single-Family	64.71	1,031		50			150			50		
Medium	36.96	799		415			604			1,306		
Medium-High	94.06	1,561		424			550			1,078		
Group Quarters	5.14		N/A				N/A			N/A		
Subtotal	200.87	3,391	7,345[b]	889	9,205[b]	2.1	1,304	10,070[b]	3.1	2,434	12,430[b]	5.8

Type of Use	1983 Existing	Low A Increase From 1984-2000		Moderate B Increase From 1984-2000		High C Increase From 1984-2000	
	Acres	Acres	Annual Increase	Acres	Annual Increase	Ares	Annual Increase
Commercial							
Retail/Service/Hotel	38.96	28.00	1.75	28.00	1.75	53.70	3.36
Office	41.46	13.70	0.86	15.70	0.98	21.70	1.36
Industrial							
Heavy-Light	311.72	39.20	2.45	49.90	3.06	64.40	4.03
Business Park	N/A	47.00	2.94	50.40	3.15	63.10	3.94
Oil Drill Sites	26.73	N/A	N/A	N/A	N/A	N/A	N/A
Public/Quasi-Public (including Parks)	74.87	4.30	0.27	4.30	0.27	4.30	0.27

a Growth alternatives project population and dwelling units in Signal Hill over the next 17 years using different alternative policy assumptions. Holding capacit on the other hand, establishes the zoning ordinance. It is necessary for the city's holding capacity to exceed the time-framed projected population.

b Includes 348 persons in group quarters.

V. GOALS AND POLICIES

Signal Hill's land use goals and policies are responsive to community needs and recognize both constraints and the community's preferred policy growth direction as discussed in preceding sections of this element. Goals are defined as broad, long range conditions which the City will strive to reach. Policies are more specific statements of direction for the City to achieve these goals.

GOAL 1

Manage growth to achieve a well balanced land use pattern that accommodates existing and future needs for housing, commercial and industrial land, open space, and community facilities and services, while maintaining a healthy, diversified economy adequate to provide future City revenues.

Policy 1.1

Reduce the City's holding capacity to that needed to accommodate year 2000 moderate growth population projections.

Policy 1.2

Provide opportunities for a variety of residential densities and housing styles, concentrating on increasing opportunities for developments at low to moderate densities.

Policy 1.3

Return large undeveloped high density areas to lower residential densities.

Policy 1.4

Support the maintenance and location of medium and higher density residential areas where best suited from the standpoint of current development, accessibility, transportation, municipal facilities, economic feasibility, and existing blight.

Policy 1.5

Provide for density bonuses which exceed maximum densities specified in the land use plan and classification system in this chapter, for privately sponsored development projects for low and moderate income or "special need" households in low, medium, and high density land use classifications.

Policy 1.6

Encourage infill of previously bypassed parcels in areas already predominantly developed.

Policy 1.7

The distribution and intensity of land uses shall be consistent with the land use plan and classification system contained in this chapter.

Policy 1.8

Designate appropriate areas where mixed uses shall be permitted.

Policy 1.9

Ensure an adequate supply of commercial and industrial land for potential commercial and industrial expansion and development.

Policy 1.10

Broaden the City's tax base by attracting commercial and industrial development to the City which will provide economic and employment benefits to the community while ensuring compatibility with other general plan goals and policies.

Policy 1.11

Focus major commercial activity into economically viable and attractive centers. Concentrate retail, office, and complimentary uses in or near the City's Town Center

as a catalyst for revitalization. Support the Spring Street, Atlantic Avenue, Pacific Coast Highway corridors as secondary commercial locations and undertake further analysis of each area to define more specific development goals.

Policy 1.12

Reinforce quality highway and service commercial development adjacent to the City's major highways, discouraging typical strip commercial development.

Policy 1.13

Provide incentives to encourage lot consolidations and large parcel land assemblage to provide expanded opportunities for coordinated development and redevelopment.

Policy 1.14

Support a diversified balance of commercial and industrial uses to ensure the City's continued economic health.

Policy 1.15

Promote development of light industrial uses under strict performance standards. Encourage "Industrial Parks" as the preferred method of accommodating industrial growth.

Policy 1.16

Discourage the expansion of large storage tank facilities and petroleum refineries or any other industries which by their nature produce noise, odors, dust, traffic, and air pollution which pose a risk to human health or the environment.

Policy 1.17

Provide measures by which development can be made compatible with existing oil operations and can be extended to oil lands when oil operations cease.

Policy 1.18

Maintain or enhance the 1989-1990 per capita purchasing power of the City's General Fund for a wide range of accessible public facilities and community services, including fire and police protection, educational, cultural and recreational opportunities, and other municipal services.

Policy 1.19

Increase the amount and network of public and private open space areas which are adequate in size and location to be usable for active or passive recreation, as well as for visual relief, concentrating especially south and east of Willow and Walnut, as well as the hilltop area and east to Redondo Avenue.

Policy 1.20

Emphasize the Civic Center area as the focal point for community, civic, cultural, and recreational activity.

Policy 1.21

Encourage landowners to contribute land and facilities to the City which add to it's beauty, convenience, amenities and cultural enrichment.

Policy 1.22

Utilize the City's proximity to universities and major hospitals to attract complimentary businesses.

Policy 1.23

Undertake an effort to modify present City boundaries in areas where they are irregular, thus creating inefficiencies.

GOAL 2

Ensure that new development is consistent with the City's circulation network, availability of public facilities, existing development constraints, and the City's unique characteristics and natural resources.

Policy 2.1

Coordinate and monitor the impact and intensity of land uses in Signal Hill and Long Beach on the City's existing transportation and circulation systems so that they are able to provide for the efficient movement of people and goods with the least interference.

Policy 2.2

Locate major commercial uses and infrastructure in areas which are easily accessible to major transportation facilities.

Policy 2.3

In hillside areas, encourage clustering of residential development when this method will better preserve the natural terrain and open character of the City.

Policy 2.4

Preserve the integrity of hillside areas through low density development, regulating the maximum intensity of development through a precise plan or specific plan review process.

Policy 2.5

In designing hillside development, give particular attention to maximizing view opportunities, minimizing dangers of geologic and soil hazards, minimizing adverse visual impact on surrounding areas, ensuring compatibility with the natural environment, to the maximum extent possible, and recognizing other general plan policies.

Policy 2.6

Hillside development should be designed to follow natural contours, where possible and to minimize the amount of land alteration. The location and design of structures and access should maximize the natural appearance of the hillside areas, discouraging development of isolated areas which are difficult to reach.

Policy 2.7

Protect scenic vistas from public and private areas with special attention given to vistas adjacent to Panorama Drive and 23rd Street west of Stanley Avenue.

Policy 2.8

Regulate development in identifiable hazardous areas or in areas that are environmentally sensitive.

Policy 2.9

To ensure an orderly extension of essential services and facilities and preservation of a free-flowing circulation system, require the provision of essential services and facilities at the developer's cost where these systems do not exist or are not already part of the City's financed annual Capital Improvement Program (CIP).

Policy 2.10

Maintain essential access to oil resources.

Policy 2.11

Discourage development of heavy, noxious industries which may overburden city infrastructure or public services.

GOAL 3

Assure a safe, healthy, and aesthetically pleasing community for residents and businesses.

Policy 3.1

Mitigate traffic congestion and unacceptable levels of noise, odors, dust, and glare which affect residential areas and sensitive receptors.

Policy 3.2

Enhance the interface between existing and future redevelopment and oil production activities to protect the access to the resource while mitigating adverse impacts of oil field operations within an urban area.

Policy 3.3

Ensure a sensitive transition between commercial or industrial uses and residential uses by means of such techniques as buffering, landscaping, and setbacks.

Policy 3.4

Where mixed uses are permitted ensure compatible integration of adjacent uses to minimize conflicts.

Policy 3.5

Encourage the elimination of nonconforming uses and buildings.

Policy 3.6

Ensure adequate monitoring of those uses which involve hazardous materials to avoid industrial accidents, chemical spills, fire, and explosions.

Policy 3.7

Maintain and enhance the quality of healthy residential neighborhoods.

Policy 3.8

Promote the rehabilitation, revitalization, or replacement of deteriorating residential properties, if necessary, without threatening the security and comfort of residents.

Policy 3.9

Safeguard residential neighborhoods from intrusion by nonconforming and disruptive uses.

Policy 3.10

Encourage the revitalization and redevelopment of older commercial and industrial areas.

Policy 3.11

Maintain and improve, where necessary, the City's infrastructure and facilities.

Policy 3.12

Encourage and promote high quality design and physical appearance in all development projects compatible and sensitive to the City's natural resources and municipal services.

Policy 3.13

Reinforce Signal Hill's image and community identity within the greater Long Beach Metropolitan area.

Policy 3.14

Preserve and enhance the City's special residential character and "small town" atmosphere by encouraging low intensity residential development and the harmonious blending of buildings and landscape, particularly in proximity to hillside areas.

Policy 3.15

Encourage the establishment of a unique identity in new neighborhoods.

Policy 3.16

Improve the image of major highways by use of landscaping, lighting, graphics, and/or other streetscape treatments.

Policy 3.17

Review and revise, as necessary, the City's development standards to improve the quality of new development in the City and to protect the public health and safety.

Policy 3.18

Whenever possible, create an "office park" or "campus" like environmental for new industrial park developments.

Policy 3.19

Require the undergrounding of all new powerlines and communication cables.

Policy 3.20

Encourage development of greenbelts to reinforce the unique character and beauty of "The Hill".

GOAL 4

Ensure that future land use decisions are the result of sound and comprehensive planning.

Policy 4.1

Consider all general plan goals and policies, including those in other general plan elements, in evaluating proposed development projects for general plan consistency.

Policy 4.2

Maintain consistency between the land use element, zoning ordinances, and other city ordinances, regulations and standards.

Policy 4.3

Endeavor to promote public interest in the understanding of the general plan and regulations relating to it.

Policy 4.4

Encourage citizen participation in the planning and development of land use programs.

Policy 4.5

Foster inter-governmental cooperation and coordination in order to maximize the effectiveness of land use policies.

TABLE 6

PROPOSED LAND USE

	Land Use Category	Acreage	Percent of Total
1.1	Very Low Residential Density (up to 5 du/ac)	30.42	2.19
1.2	Low Residential Density (5-10 du/ac)	126.35	9.09
1.3	Medium Residential Density (10-15 du/ac)	107.52	7.74
1.4	High Residential Density (15-21 du/ac)	107.87	7.74
	Total Residential	372.16	
2.0	Mixed Use	6.65	0.48
3.1	Town Center	75.66	5.45
3.2	Commercial General	141.13	10.16
3.3	Commercial Office	36.70	2.64
3.4	Commercial Industrial	101.64	7.32
	Total Commercial	361.78	
4.1	Light Industrial	178.09	12.82
4.2	General Industrial	149.89	10.79
	Total Industrial	327.98	
5.0	Open Space	33.69	2.43
	Net Total	1,095.61	78.80
	Streets	293.31	21.12
	Total	**1,389.92**	**100.0**

TABLE 7

POPULATION AND HOUSING CAPACITY
GENERALIZED LAND USE PLAN

Residential Density Category	Acres	Percent	D.U./ Acres	Buildout Units	Population/ D.U.	Buildout Population[a]
Very Low	30	8	01-05	30-150	2.4	72-360
Low	126	34	05-10	630-1,260	2.2-2.4[b]	1,424-2,848
Medium	108	29	10-15	1,080-1,620	2.2	2,376-3,564
High	108	29	15-21	1,620-2,268	2.2	3,564-4,990
Totals	**372**	**100**		**3,360-5,298**		**7,436-11,762**
Maximum Theoretical Capacity[c]				5,298		11,762
Effective Capacity[d]				4,503		9,998

a Population capacity formula = total available acres x permitted dwelling unit density x 0.05 vacancy rate x average persons per dwelling unit factor.
b 30 percent of units at 2.4 persons per dwelling unit; 70 percent at 2.2 persons per dwelling unit.
c Maximum theoretical capacity assumes total saturation of each land use category. See Appendix D for a more detailed explanation of capacity concept.
d Effective capacity assumes 85 percent of maximum theoretical capacity based on realistic saturation. See Appendix D for a more detailed explanation of this capacity concept.

Note: D.U. - dwelling units.

C. LAND USE DESIGNATIONS

1. RESIDENTIAL CATEGORIES

Four residential categories are established for the purpose of providing the City with a range of building intensities that allow flexibility to deal with various site constraints and opportunities. A mix of higher and lower densities may be permitted within an area, but the overall density within a land use category shall not exceed the density shown on the land use plan. In some areas, densities allowed at the zoning level may be substantially lower than shown on the land use plan if deemed necessary to implement general plan goals, policies or implementation programs. Examples include, but are not limited to, areas where severe topographical or hazardous conditions exist.

VI. LAND USE POLICY MAPS

A. Introduction

Land use policy maps reflect the application of general plan goals and policies to the distribution and intensity of future land uses in Signal Hill. There are two land use policy maps presented in this section: a land use plan and a special management areas policy map.

While the land use plan describes the general pattern of land uses at buildout, it does not establish specific time limits for phasing of future development. The land use plan is not meant to serve as a zoning map but should only be interpreted as a general guide to the amount, type and relationship of land uses. Upon adoption of the general plan, the City will then proceed to bring the zoning ordinance into conformance with the land use plan.

B. Land Use Acreages and Potential Capacity

Figure 4 illustrates the proposed Land Use Plan for the Signal Hill planning area. There are 12 land use categories. Approximately 2.7 percent of the City is designated for residential uses, 19 percent for commercial uses, 31 percent for industrial uses and 2 percent for open space (the remaining 21 percent is streets). Table 6 presents the acreages for the proposed land use plan.

Section C describes the 12 land use categories shown on Figure 5 in more detail, including their purpose, intended character and density or intensity. Table 7 provides a breakdown of residential land uses in Signal Hill by category for purposes of identifying the potential dwelling unit and population of the land use plan.

As evidenced by Table 7, the effective population capacity of the land use plan at maximum buildout is approximately 9,998 persons. This represents an increase of 18.7 percent or 1,575 persons over the City's 1989 population of 8,423 as shown in Table 1.

Very Low Residential Density (1-5 Dwelling Units Per Acre)

The very low residential density category is intended for areas generally located on the southwest slopes of the hill. The concern for slope stability, existing oil operations, nearby view protection concerns, as well as the geologic hazards in the area make these areas unsuitable for higher residential densities.

While large lot or estate type single family development will be allowed, patio homes and attached single family units with zero lot lines in clusters of two would be permitted in places. Building heights generally shall not exceed 25 feet. The use of the cluster concept at this density is desirable to allow for a more efficient relationship of structures to streets and utilities; to protect the natural topography; to minimize visual impacts, grading and the hazards of development in areas of steep slope and geologic hazard; and to permit concurrent development around existing oil production activities.

Development of very low density areas will warrant developer installation of most required public infrastructure and services. The means of providing these public facilities without incurring public costs will have to be demonstrated, and existing and projected hillside service problems and deficiencies should be addressed to allow for logical development. All development should also be located at elevations sufficiently below the elevations of 23rd Street to avoid blocking the views for hilltop residents and visitors along the 23rd Street corridor. Private access from any lot or parcel located along 23rd Street will also need close regulation due to severe slope conditions and the desire to maintain a permanent view corridor along 23rd Street, west of Stanley Avenue. Requirements for the provision of parkland and facilities and/or greenbelt areas, in lieu of fees, should be encouraged in accordance with the city's subdivision ordinance. The precise location of requested dedications would be determined as development plans become more definite.

Because of the unique characteristics of this land use category and the desire to encourage clustered projects, normal residential property development standards are not described. In order to achieve the purpose of this land use category, all development and access standards shall be established through a specific plan or planned development/precise plan process.

Low Residential Density (5 to 10 Dwelling Units Per Acre)

The Low Residential Density category is characterized by residential densities somewhat higher than the very low residential density category. With gross densities averaging between 5 and 10 dwelling units per acre, additional housing types other than single family development may be permitted. However, development in this land use category should continue to maintain a low density character with building heights not exceeding 25 feet.

Permitted housing types may include typical single family units, patio homes, attached single family units with zero lot lines, duplexes and, under certain conditions, multiple family units in clusters of four to six townhouse type units. The maximum density of this land use category may be exceeded to compliment general plan housing element policy, only as approved by the City Council, when 25 percent of the units constructed in a project of 5 or more units are constructed for low- and moderate-income households or when 10 percent of the units are constructed for income households as defined by the California Health and Safety Code.

The low residential density category is basically divided into two distinct subareas necessitating the use of different implementation mechanisms in each subarea. Subarea 1 is located on the north and east flanks of the hill and is generally bounded by Combellack Drive, the extension of Junipero Avenue to Burnett Street, Panorama Drive, Temple Avenue, Hill Street, and Hathaway Avenue. While this subarea is not as severely sloped as the southwest flank of the hill, slope stability is still a major concern. Although the area is largely vacant, it is continuing oil production with many of these activities expected to remain in the near future.

As in the case of the very low density category, development of this subarea will require developer installation of required public infrastructure and services. The means of providing these public facilities without incurring public costs will have to be demonstrated and existing and projected hillside service problems and deficiencies should be addressed to allow for logical development. All development will also have to be located at elevations sufficiently below Panorama Drive and Temple Avenue to avoid blocking the views for hilltop residents and visitors along these scenic corridors. Private access from any lot or parcel fronting on Panorama Drive, Temple

Avenue or Hill Street should also be closely regulated. The provision of greenbelt areas and/or park land and facilities, in lieu of fees, should also be encouraged in accordance with the city's subdivision ordinance. While the precise location of requested dedications will be determined as development plans become more definite, a major priority in this subarea should be the acquisition of passive recreational areas adjacent to the Alamitos #1 Historical Landmark.

Topographical features, view sensitivity, the presence of geologic hazards as well as continuing oil production activities make the use of the cluster concept in this subarea highly desirable. While development and access standards should be regulated in this subarea through a specific plan or planned development/precise plan process, at least 30 percent of all new construction within this subarea should be detached single-family development or single-family development. A reduction of this percentage to an amount established in the zoning ordinance should be allowed where significant development constraints exist, particularly steep slopes.

Subarea 2 in the low density category is located on the southeast flanks of the hill, south of 23rd Street and Hill Street. The subarea is also bounded by Stanley Avenue, 20th Street, and 19th Street and Orizaba and Obispo Avenues. The area is generally characterized by relatively flat land with slopes less than 10 percent and good access to arterial streets and public facilities. There are substantially large undeveloped sites scattered within the subarea but generally they are located east of Temple Avenue. There are also a considerable number of smaller lots surrounded by, or adjacent to, multiple-family development, typically with dwelling unit densities higher than the low residential density land use ranges recommended. It would appear appropriate to attempt to integrate development on these isolated parcels with the established land use patterns on adjacent properties. Appropriately, lots of at least 5,000 square feet at the time of adoption of the zoning ordinance implementing the general plan shall be permitted to develop with a maximum of two single-family duplex or townhouse dwelling units. In the absence of the above condition, dwelling unit density would range from approximately 4,300 to 8,000 square feet of lot area per dwelling unit depending on future adopted zoning regulations. No requirements for preparation of a specific plan or planned development/precise plan would be required in this subarea, only implementation of standard zoning provisions. In the absence of significant development constraints, the zoning ordinance may permit all new construction within a portion or portions of this subarea to be detached single-family residential development.

Medium Residential Density (10 to 15 Dwelling Units Acre)

The medium residential density category includes those existing developed areas within the City where there is a desire to preserve a low density character and appearance, as well as several vacant tracts of land where in-fill residential development is anticipated. This land use category includes densities appropriate for single-family small lot subdivisions and duplexes either in one structure or in two detached buildings. Present lot sizes in this land use category generally range from 5,000 to 6,000 square feet. It is anticipated, however, that some exclusively single family areas within this category would remain based on existing development patterns.

Four major areas within the City are included in this land use category. The first is located in the southeast portion of the City generally south of 21st Street, east of Cherry Avenue, and north of 19th Street. The second area is generally located north of the San Diego Freeway between Myrtle Avenue and Walnut Avenue. The third area is generally bounded by Walnut Avenue, 25th Street, Rose Avenue and Creston Avenue. The fourth area is west of Cherry Avenue and is bounded by 21st Street and Hinshaw Park.

High Residential Density (15 to 21 Dwelling Units Acre)

The high residential density category allows for a wide range of living accommodations including single- and multiple-family units, apartments, condominiums, cooperatives, community apartments, and townhouses of two to three stories in height. The maximum density in this land use category may be exceeded to implement general plan housing element policy, only as approved by the City Council, when 25 percent of the units constructed in a project of five or more units are constructed for low- and moderate-income households or when 10 percent of the units are constructed for low income households as defined by the California Health and Safety Code.

High density areas are proposed in areas of relatively flat land with good access to arterial streets and community facilities and infrastructure adequate to support high density. The intent of this land use designation is to maintain existing developed

multiple-family areas while also providing opportunities for recycling of older deteriorating neighborhoods where maintenance efforts would produce minimal results.

Residential densities in the RH zone shall be contingent upon lot size. Lots 10,000 square feet or less shall have a density of no more than 15 dwelling units per acre. Lot sizes between 10,000 and 20,000 square feet shall be permitted to have a density of no more than 18 dwelling units per acre. A maximum density of 21 dwelling units per acre shall be permitted on lots 20,000 square feet or greater in size.

2. COMMERCIAL CATEGORIES

Mixed Use

Development under the mixed use category may include either commercial uses or small scale medium density residential development. The overall characteristic of this category will be the block by block and (in some cases, floor by floor) mixture of residences and compatible businesses of various sorts, where there is a mutually supporting relationship among uses. Actual permitted uses, and protective mechanisms to ensure compatibility and integration of uses will be implemented with zoning provisions.

Town Center

The Town Center is intended to serve as a concentrated commercial core for the City. The Town Center category meets the land use element policy to discourage commercial strip development by encouraging intensification of regional and local retail sales and service activities. Located at or near the key intersection of Willow Street and Cherry Avenue, the Town Center land use category provides for development of this highly visible location with a coordinated and wide range or retail, office, service, amusement, and related uses. Many of the retail supporting outlets found in community shopping centers typify what may be expected in the Town Center. The type of uses allowed would include, but would not be limited to, general retail uses which provide for the purchase of convenience items, such as food, drugs, and personal services; major commercial facilities, such as apparel,

furniture, and appliances stores; and service commercial uses, such as banks and professional offices. In order to promote orderly and compatible development, a specific plan and/or planned development/precise plan should be required for contiguous vacant areas of 10 acres or more in this land use category outside of the existing Town Center and Town Center West Specific Plan areas, even if development is only proposed on smaller portions of the property.

Commercial General

The commercial general category is characterized by a variety of miscellaneous retail and commercial service uses, many of which are highway oriented. New and used automobile dealerships, restaurants, supermarkets, drug stores, carpet, appliance, furniture or hardware stores, banks or savings and loan associations, paint stores, and a host of other types of retail sales or service uses would be appropriate. With respect to the manner of development, projects of larger sizes are desirable in planned, grouped concentrations as opposed to typical strip commercial development. The City should devise restrictive site development standards for this land use category which encourage larger projects and provide for adequate setbacks, parking, landscaping, buffering from residential districts and other features which will create well-designed, efficient and attractive projects. Areas of concern which should receive special zoning treatment would be the proliferation of small motel projects and facilities along Pacific Coast Highway. A comprehensive sign ordinance would also help reduce sign clutter throughout the City.

Hilltop Specific Plan

The hilltop specific plan area (designated SP2 on the zoning map) is bounded by Panorama Drive and 23rd Street. Located on the flatter uppermost portions of the hill, the subarea is highly visible from many portions of the City and adjacent areas. In addition to a variety of residential uses ranging from two to four stories in height; parks, publicly owned open space or recreational facilities and a restaurant shall be allowed. Petroleum extraction and other highly visible or intensive uses shall be permitted only subject to the granting of a conditional use permit. If authorized, nonresidential development should be integrated to compliment surrounding residential development and be blended into the total land use scheme, avoiding a harsh contrast either in design or activity level.

For the hilltop subarea, design emphasis should be placed on maintaining the current concentric zone pattern which allows for greater height limits and densities depending on elevation. Smaller properties and properties at lower elevations would be restricted to lower building heights at the lower end of the permitted density range in order to encourage lot consolidation. Developer installation of most public infrastructure and services will be required, including significant circulation and access modifications to eliminate unnecessary and hazardous right-of-ways. Driveway access to parcels located along Panorama Drive and 23rd Street is not recommended in order to reinforce a greenbelt or park-like atmosphere around the hill and these scenic corridors. All development and access within this subarea should be regulated through the Hilltop Specific Plan.

Commercial Office

The commercial office designation provides areas for the development of professional offices and related commercial uses. Uses permitted within this category will include professional, financial, administrative, medical and general offices, business support services, financial, insurance and real estate services, supportive commercial uses such as restaurants, and medical services and other public service type uses. Two areas are basically proposed within this land use category. The largest area is bounded by Patterson Street, California Avenue, Spring Street, and the western City boundary along Atlantic Avenue. In addition, a commercial office area is proposed south of 21st Street between Walnut Avenue and Gaviota Street. The latter area will serve as a buffer between residential properties and the industrial uses to the west. The commercial office area along Atlantic Boulevard has some unique characteristics. Since this major highway is adjacent to Long Beach Memorial Hospital, a major medical service provider and employment generator, high density office and commercial service uses and facilities would be appropriate in this area. Existing infrastructure deficiencies within the area, however, currently represent a major constraint to future development. The area has, therefore, been designated as a special study area to permit a comprehensive reexamination of the existing street and infrastructure pattern.

Commercial Industrial

The commercial industrial designation is intended to accommodate a combination of commercial and light industrial uses. A range of limited and restricted manufacturing facilities, in addition to selected highway-oriented commercial uses, shall be permitted. The type and intensity of commercial uses permitted in this land use category should be compatible with uses permitted under the commercial general category previously described. Light industrial or manufacturing uses shall be permitted if the nature of their operations are compatible with permitted commercial uses. Permitted industrial uses shall include, but shall not be limited to, industrial research laboratories, light industrial and commercial warehousing operations, and certain manufacturing establishments with or without wholesale or retail sales showrooms. Industrial or commercial operations which might create offensive levels of noise, vibrations, air pollution, radioactivity, or glare shall not be permitted.

Each of the designated commercial/industrial areas within the City have frontage or are close to Willow Street or Cherry Avenue.

3. INDUSTRIAL CATEGORIES

Light Industrial

The light industrial category is designed to accommodate a variety of light industrial uses which are nonpolluting and which can coexist with surrounding land uses. Permitted uses shall include, but shall not be limited to, research and development, light manufacturing and processing, assembly, distribution, warehousing and wholesaling of materials (which are already in processed form), light industrial business parks, and related service uses.

Light industrial areas are dispersed throughout the community. The largest concentration of this land use category is roughly triangular in shape and occupies an area in proximity to Walnut Avenue, south of Burnett Street. North of the San Diego Freeway, two areas are designated for light industrial use. One is north of 33rd Street in proximity to Myrtle Avenue. The other is divided by the freeway and is east of Burroughs Elementary School.

Three light industrial areas are located in the eastern portion of the City. One is located between Junipero and Temple Avenues along 28th Street. Another is located northeast of Hathaway Avenue between Redondo and Temple Avenues. The last area is located generally south of 20th Street between Orizaba and Redondo Avenues.

The areas within the light industrial land use category which are adjacent to residential neighborhoods, schools, and light commercial uses make them inappropriate for general to heavy industrial development. Appropriately, within the light industrial category, specific industrial park type development standards should apply and be more restrictive than those developed for the general industrial category discussed below. Buffering to prevent potential land use incompatibilities shall be given special consideration. Special conditions, including the provision for setbacks, screening barriers, berms, generous landscaping, and low profile buildings should apply in light industrial areas directly adjacent to a residential area.

General Industrial

A high percentage of land within the City is designated for general industrial uses. Properties designated in the general industrial category are large areas that will remain generally buffered from residential areas by the light industrial land use category or other nonindustrial categories.

The general industrial category is intended to provide for the development of a variety of general industrial and service uses which do not create smoke, gas, odor, dust, sound, vibration, soot, or glare to any degree during plant operations which might be obnoxious or offensive to persons residing or conducting business in Signal Hill. Standards incorporated into the zoning ordinance should allow for the development of environmentally compatible industries within this land use category. Standards should be slightly more permissive than those developed for light industrial areas. This will encourage the growth of both light and general industrial uses in the general industrial category. Obnoxious heavy industrial uses shall not be permitted in any industrial area. The expansion of petroleum refining storage areas shall not be encouraged.

Because of the generally large nature of parcels in this land use category it is anticipated that most available land will be developed into well-planned industrial parks. Project developers shall be encouraged to place restrictions on the sale of parcels in order to achieve high quality, visually attractive industrial development. Where lots or parcels are developed on an individual basis, the City shall require that buildings be constructed and grounds landscaped in a manner which is complementary to surrounding development.

4. OPEN SPACE CATEGORY

The open space category includes such uses as public parks, public schools, special public facilities, recreational uses, and may permit limited housing opportunities. Open space uses may also include special management areas, such as high fire risks, unstable soils, or slopes which are essentially unimproved and where environmental factors preclude most types of conventional development and land uses, including but not limited to oilfields, view corridors, areas of outstanding scenic, historic or cultural value, and areas which serve as links between major recreation and open space areas. The city is preparing a Parks Master Plan to set standards for park acquisition and development. The plan will be completed in 1989.

5. SPECIAL STUDY AREA

The area designated as Special Study Area is the Atlantic Corridor because it needs particular attention during the planning period. The corridor is also discussed under the commercial office category. The designation signifies a commitment to specific public and private actions which will improve the quality of future development in the Atlantic Corridor, by further evaluating existing development constraints to avoid potential problems.

D. SPECIAL MANAGEMENT AREAS

A number of environmental and man-imposed factors impact the ultimate use of land. Development without adherence to special precautions in areas where these factors exist could result in the loss of, or severe damage to, life and property, or could seriously alter and degrade the natural environment. For these reasons, a special management area policy map has been prepared to identify these areas

consistent with land use element goals and policies (see Figure 5). Special standards for development in special management areas are applicable regardless of other land use categories.

1. GEOLOGY STUDY AREA

Description

Areas within a "special studies zone" as identified by official maps of the state geologist pursuant to the Alquist Priolo Geologic Hazards Zone Act (Chapter 7.5, Division 2 of the California Public Resources Code).

General Objectives

1. Structures for human occupancy will not be constructed across an actual trace of an active fault line. If the fault is found to be active, buildings and structures shall be setback a minimum of 50 feet from the identified location of the fault line.

2. Proposed projects in a geologic study area shall be subject to site-specific soil and geologic evaluations by a registered civil engineer and engineering geologist to determine the presence of any fault traces and the suitability of the site for development.

3. Structures shall be designed in accordance with the latest edition of the Uniform Building Code for construction which will withstand seismic stress.

2. NOISE IMPACT AREA

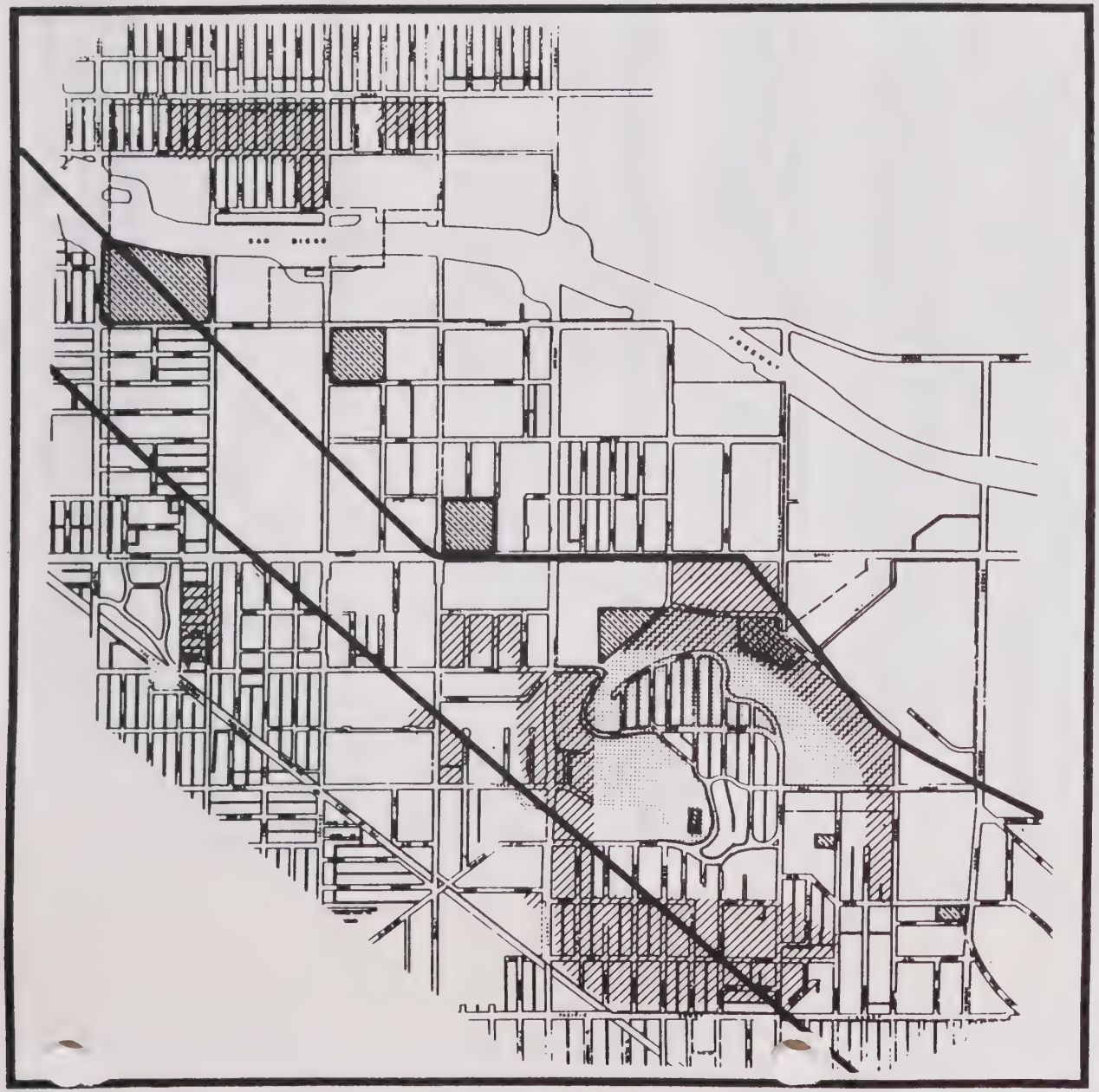
Description

Residential areas located within projected year 2000 noise contours which exceed an annual CNEL of 65 dB.

General Objectives

1. Within noise impact areas, State of California Housing and Community Development Law (Title 25) standards regarding noise and its abatement shall be followed. These standards state: "Residential structures to be located within an annual CNEL contour of 65 dB require an acoustical

Figure 5

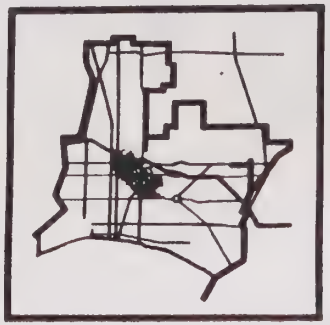


SPECIAL MANAGEMENT AREAS

LEGEND

- Geologic Study Area
- Noise Impact Area
- Sensitive Resource Area
- Major Centralized Extraction Area

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analysis showing that the structure has been designed to limit intruding noise to the prescribed allowable levels. Interior community noise equivalent levels (CNEL) with windows closed, attributable to exterior sources, shall not exceed an annual CNEL of 45 dB in any habitable room."

2. Conditions contributing to projected year 2000 noise exposure levels should be closely monitored. As changes occur in the factors which contribute to these levels revised noise contours should be prepared. Reduction or expansion of the extent of the CNEL contours should be accompanied by appropriate reduction or expansion in noise impact areas as shown on the special management policy map.

3. SENSITIVE RESOURCE AREA

Description

Areas of high environmental or aesthetic quality or scenic sensitivity, including all areas where average slopes are greater than 20 percent and where urban development has the potential to alter the physical form and appearance of the hills as the focal point of the community.

General Objectives

1. Within sensitive resource areas, development and access standards should be provided through a specific plan or planned development/precise plan process.

2. Greenbelt areas should be incorporated at key focal points within sensitive resource areas, wherever possible.

3. Buildings and structures should be designed and located in harmony with surrounding development and the natural environment.

4. Buildings and structures should be constructed to avoid the unnecessary impairment of scenic views.

5. In sloped areas, the natural topography and scenic features of the site shall be retained and incorporated into proposed developments as much as possible.

6. In sloped areas, clustering of residential areas shall be encouraged.

7. Right-of-way and public infrastructure requirements shall be designed to reflect the unique characteristics of sloped areas and remaining portions of the hill.

4. MAJOR CENTRALIZED EXTRACTION AREA

Description

Areas where major and centralized oil, gas, and hydrocarbon substances are being extracted or drilled for, including centralized facilities for the maintenance and operation of equipment and structures for drilling and production operations.

General Objectives

1. Development activities within major centralized extraction areas shall be subject to review procedures for the purpose of ensuring compatibility with continuing extraction operations and imposing controls to protect access to major facilities.

2. All development activities within major centralized extraction areas shall be conducted in harmony with continuing extraction or production operations and be authorized by the oil surface owner leaseholder or operator.

3. Development activity within major centralized extraction areas shall be provided with adequate buffering and screening.

4. Drilling and production within major centralized extraction areas shall be consolidated as much as possible.

VII. IMPLEMENTATION - STRATEGY AND PROGRAM

This section of the land use element outlines a coordinated set of actions and processes to carry out the goals and policies of the land use element. The following action statements implement the framework established by land use goals and policies.

Implementation Program		Corresponding Policy
1.	The City will review and revise, as necessary, all city ordinances related to land use and development to establish consistency with land use element goals and policies, the land use plan and special management areas map. Revisions shall include but not be limited to the following:	1.7, 1.9, 4.2
	a. Requirements for a specific plan or precise plan prior to development in the very low density land use category.	1.1, 1.2, 1.3, 1.7, 1.19, 2.3,
	b. Revision of the Hilltop Specific Plan consistent with the high residential density land use category and the special management area map.	1.1, 1.2, 1.7, 2.7, 2.8, 2.9, 3.20
	c. Provision for density bonuses where a percentage of low and moderate income housing is provided in private development projects. See land use plan discussion to determine land use categories where this would apply.	1.5, 1.7
	d. Provision of incentives for lot consolidations to encourage coordinated, well designed projects.	1.6, 1.13
	e. Revision of current development standards in the City's commercial and industrial zoning districts.	1.9, 1.10, 1.11, 1.12, 1.14, 1.15, 1.16, 3.1, 3.17, 3.18
	f. Revision of standards affecting existing oil production activities contained in the Zoning Ordinance and Oil Code and establishments of controls to improve the interface between oil production activities and urban uses.	1.17, 2.8, 2.10, 3.2

Implementation Program		Corresponding Policy
g.	Revision, as necessary, of regulations for storage, use and transport of hazardous chemicals.	1.17, 2.8, 3.6
h.	Revision of regulations for remediation of contaminated soils.	1.17, 2.8, 3.6
i.	Evaluation and implementation of new grading standards and requirements (separate from the Uniform Building Code) which are sensitive to the City's unique hillside conditions.	2.3, 2.6, 2.8
j.	Revision, as necessary, of the Uniform Administrative Code, the Uniform Building Code, the Uniform Housing Code, the Uniform Code for the Abatement of Dangerous Buildings, the National Electrical Code, and the Long Beach Fire Code.	3.5, 3.6, 3.7 3.8
k.	Revision, as necessary, of requirements for parking, including but not limited to, standards for multiple family uses, standards for specific commercial and industrial uses and the shared use of parking facilities.	3.1, 3.4, 3.7 3.12
l.	Enforcement of the comprehensive sign ordinance to ensure attractive, coordinated, and well planned signs throughout the City which will enhance building and site design, rather than detracting from the visual appearance of developments.	3.12, 3.13, 3.14, 3.15, 3.17
m.	Revisions of the City's nuisance ordinance to provide for citation of violators of zoning ordinances and abatement of nonconforming or nuisance structures which are an immediate threat to public health, safety or welfare.	2.1, 2.8 2.5, 2.6, 2.7, 2.9, 2.10
2.	The Signal Hill Redevelopment Agency shall continue to implement Signal Hill Redevelopment Project Area No. 1. The feasibility of creating additional project areas shall be evaluated, as needed, to implement general plan goals and policies.	1.6, 1.9 1.10, 1.11, 1.12, 1.13, 1.14, 1.18, 1.19, 2.9, 3.10, 3.11
3.	Utilize the Redevelopment Agency to assemble parcels, eliminate piecemeal development, and provide for for projects which improve the City's financial picture.	1.6, 1.10, 1.11, 1.13
4.	Support state and federal legislation which will maintain and expand local financing capabilities in undertaking economic development activities and capital projects.	1.10, 1.11, 1.13, 1.14, 2.10, 3.10, 3.11

Implementation Program		Corresponding Policy
5.	Develop and undertake a marketing effort to attract industrial and commercial developments which will diversify the City's economic base.	1.11, 1.12, 1.15, 1.16
6.	Cooperatively assist the Long Beach School District in studying and developing solutions for ensuring the adequate availability of school facilities.	1.18, 4.5
7.	Study the feasibility of requiring developer dedication of land or payment of fees in lieu of land, to be used for providing temporary classrooms to alleviate overcrowded conditions as they are verified by the Signal Hill City Council.	1.18, 4.5
8.	Regularly review and revise the City's Capital Improvement Program (CIP) to ensure that expenditures are consistent with the land use plan.	1.18, 1.19, 2.2, 2.8, 3.11, 3.12, 3.13
9.	Review and revise, as necessary, standards for provision of municipal services and attempt to maintain such level and/or quality of service throughout the City.	1.18
10.	Continue to require dedication of parkland and facilities, a fee in lieu thereof, or a combination of both, as a condition of new residential subdivisions consistent with the City's subdivision ordinance.	1.18, 1.19 1.21
11.	Encourage the development of mutually beneficial relations between the Long Beach Community College District, California State University at Long Beach, the City of Signal Hill, and local industries.	1.22, 4.5
12.	Utilize joint power and mutual aid agreements, whenever possible, for the purpose of ensuring adequate municipal service coverage at the least possible cost to the community.	1.18, 1.19, 1.22, 4.5
13.	Design and implement a land use/traffic generation monitoring system as recommended by the circulation element. As needed, continue to coordinate with the City of Long Beach in implementing traffic engineering measures which will mitigate traffic problems in the City.	2.1, 2.2., 3.1
14.	Continue to require dedication of required right-of-way easements and improvement of streets and infrastructure at developer's expense consistent with Chapter 12 of the Signal Hill Municipal Code.	2.9

	Implementation Program	Corresponding Policy
15.	~~Monitor expenditures for facilities and services to identify those land uses and developments which impose significant costs on the City; modify development patterns and standards, if required, to reduce municipal costs.~~	1.18, 2.9
Revised see L.59.A		
16.	As appropriate, study the possible implementation of assessment districts in newly developing areas to help finance public improvements and services.	1.18, 2.9
17.	Periodically review user charges and fees for services and utilities to ensure that they are consistent with costs incurred by the City.	1.18, 2.9
18.	Utilizing Community Development Block Grant Funds and other funding sources, continue to administer a variety of programs to revitalize older residential areas in the City.	3.7, 3.8, 3.9
19.	Encourage private rehabilitation and revitalization of older residential, commercial and industrial areas.	3.7, 3.8 3.9, 3.10
20.	The City and Redevelopment Agency, in liaison with the Chamber of Commerce and local merchants, shall study and develop comprehensive revitalization programs for older industrial and commercial areas in the City.	3.10
21.	Utilizing Community Development Block Grant Funds and other funding sources, provide incentives for commercial rehabilitation in the Pacific Coast Highway corridor and Civic Center area.	3.10
22.	The City and Redevelopment Agency will work with land owners and developers to identify resources and opportunities in underdeveloped portions of the City.	1.18, 1.19, 2.9, 3.10, 3.11
23.	Utilize the City's site plan and design review process and the California Environmental Quality Act in the review of development projects to minimize environmental impacts and to promote high quality design and physical appearance, compatible and sensitive to the City's natural resources and to assume the availability of municipal facilities and services.	1.17, 2.1, 2.8, 2.9, 3.1, 3.2, 3.3, 3.6, 3.7, 3.9. 3.12, 3.14
24.	Study and prepare plans which will indicate desirable circulation and infrastructure systems and specific land uses within the special study area identified on the land use plan.	1.7, 1.10, 1.11, 1.12, 1.14, 1.18, 1.23, 2.9, 2.10, 3.2

15. Monitor expenditures for facilities and services to identify those land uses and developments which impose significant costs on the City; modify development patterns and standards, if required, to reduce municipal costs.

A. For any development projects of more than 20 residential units, complete a financial impact study. This report will include an analysis of the project's effect on the City's revenues, expenditures, and service levels; capital improvement needs and source of funding, and the project's ability to generate tax increment, if applicable. Financial impact will be considered and must be found acceptable as part of the approval process.

B. It is the primary goal of the City's Redevelopment Agency to use tax increment to enhance annual General Fund resources. High priority is given to projects which will provide a benefit to the general public.

C. Financial responsibility for capital improvement projects shall generally be as follows:

1) The City and the developer shall share the costs of an improvement that is included in the City's long-term Capital Improvement Program which serves residents/users within and outside the project's boundaries.

2) The developer shall be responsible for the costs of improvements:

a) Affecting only residents/users within the project's boundaries;

b) Outside the project's boundaries but are necessary to provide services or access to residents/users within the project boundaries;

c) For system replacement or major renovation affecting both the project and other areas, but made necessary by the project.

	Implementation Program	Corresponding Policy
25.	Investigate the feasibility of annexing areas outside of the City of Signal Hill which are included within the Signal Hill Planning Area. Annexation studies should consider fiscal impact, the establishment of appropriate service delivery areas, the maintenance of quality of life for Signal Hill residents and coordination with the City of Long Beach.	1.8, 2.9
26.	Develop Urban Design Guidelines for the City, including guidelines for newly developing areas, guidelines for existing neighborhoods, streetscape guidelines, and guidelines for the creation and integration of greenbelt areas within the City.	3.7, 3.8, 3.12, 3.13, 3.14, 3.15, 3.16
27.	Encourage the Chamber of Commerce, in liaison with the City and community groups, to continue the city beautification program to encourage residents and businesses in improving the physical appearance of their properties and in building greater pride in the community.	3.7, 3.8, 3.9, 3.10
28.	Continue the City's current code enforcement program communitywide.	2.8, 3.1, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10 3.12
29.	Continue to implement a long range program for undergrounding or relocating overhead distribution facilities, telephone lines and other utility services.	3.19
30.	Review public agency property acquisitions and public works projects undertaken within the City for conformance with the general plan.	4.1
31.	Utilizing the City's current site plan and design review process, review all new development projects for consistency with the general plan.	4.1
32.	Monitor land use, population, and economic data for the city, and, as necessary, review and update the land use element, zoning ordinance, and other municipal codes.	4.2
33.	Prepare an annual report on the general plan to the City Council describing the status of the plan and progress toward its implementation.	4.3, 4.4
34.	Develop and distribute public information brochures describing current land use development requirements in the City to assist the public in understanding general land use planning principles, and municipal procedures.	4.3, 4.4

Implementation Program		Corresponding Policy
35.	Continue the emphasis on providing information through close coordination and information exchange with the Chamber of Commerce and other civic groups.	4.3, 4.4
36.	Continue the practice of making presentations and holding informal study sessions and workshops with community organizations and the general public so that all parties are kept abreast of current development activities planned or underway in the City.	4.3, 4.4
37.	Continue to monitor major issues under consideration by federal, state, or other local agencies which could have an impact on Signal Hill; advocate, as appropriate, at each level.	4.5

Appendices

LAND USE ELEMENT
APPENDICES

APPENDIX A

TAXABLE RETAIL SALES FLOWS, 1983

City of Signal Hill, California

Retail Store Type	Taxable Sales Potential (000)*	Actual Taxable Sales (000)	Inflow or Outflow of Taxable Sales (000)	% of Potential
Apparel Stores[a]	N/A	N/A	N/A	N/A
General Merchandise	4,020	0	**-4,020**	**100.0**
Drug Stores[b]	N/A	N/A	N/A	N/A
Food and Packaged Liquor Stores	3,564	21,319	17,755	498.2
Eating and Drinking Places	4,091	3,579	**-512**	**-12.5**
Home Furnishings and Appliances	1,360	6,652	5,292	389.1
Building Materials and Farm Impl.	1,688	16,354	14,666	868.8
Auto Dealers and Auto Supplies	5,404	24,115	18,711	346.2
Service Stations	3,499	1,402	**-2,097**	**-59.9**
Other Retail Stores	7,123	54,861	47,738	670.2
ALL RETAIL STORES	**$26,729**	**$128,282**	**$101,553**	**379.9**

a Based on overall average per capita retail sales in Los Angeles County, and the population base in the City of Signal Hill which was estimated to be 7,163 in mid-1983.

b Apparel Stores & Drug Stores are included in Other Retail Stores.

Sources: California State Board of Equalization, Alfred Gobar Associates, Inc.

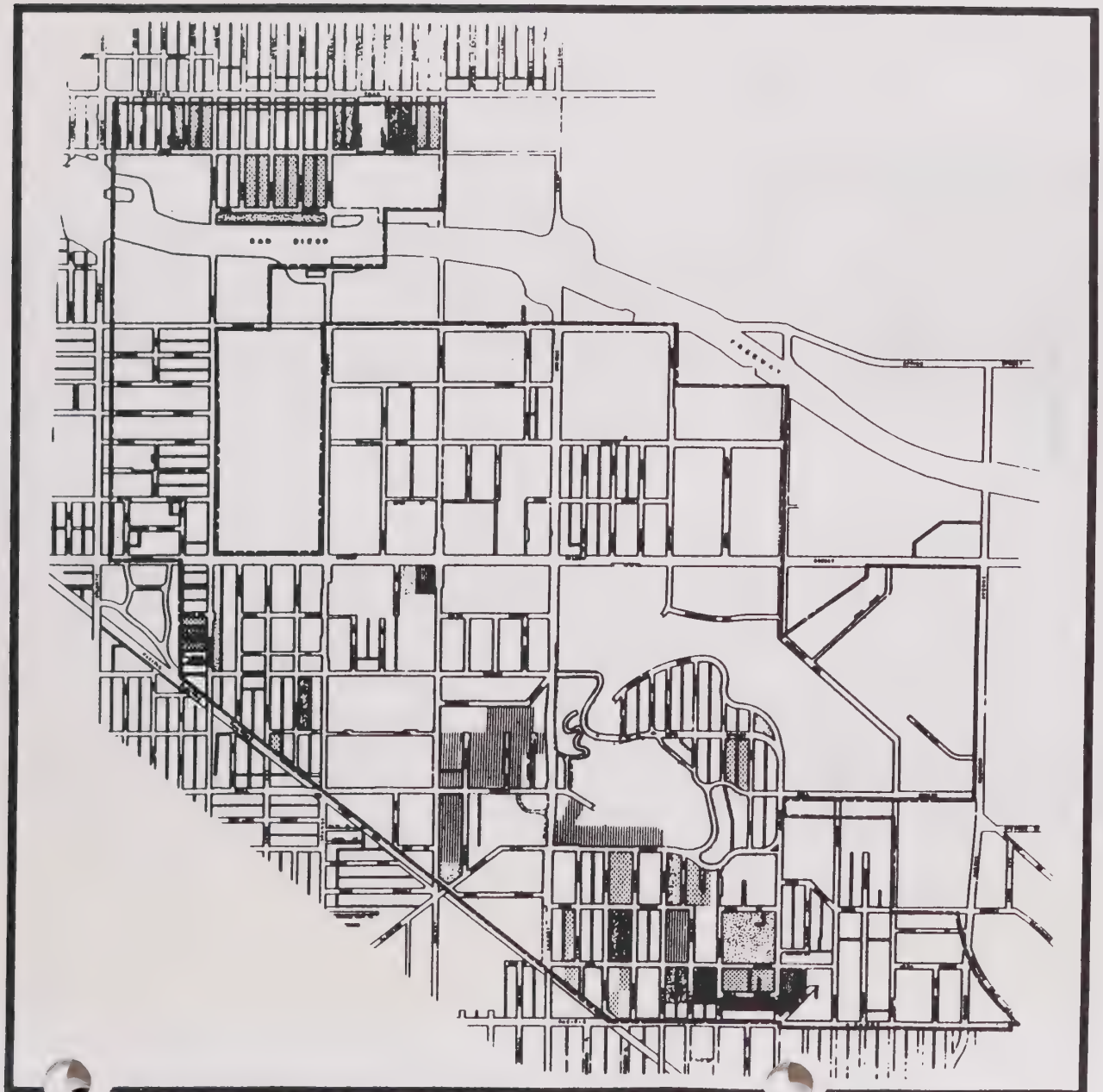
APPENDIX B

TOP TEN SALES TAX PRODUCERS FOR 1987

Rank	Name of Business	Percent of City Sales Tax Revenues
1.	Eastman, Inc.	18.93
2.	Price Club	18.43
3.	Gaines Electric Supply	4.34
4.	Beach City Chevrolet	2.99
5.	A&A Ready Mix Concrete	2.82
6.	Universal Mack/Sales	2.59
7.	A.L.L. Roofing	2.44
8.	Target Store	2.10
9.	A-1 Home Appliance	1.95
10.	Petrolane Transport	1.52
	Total	**58.11**

Source: City of Signal Hill.

APPENDIX C

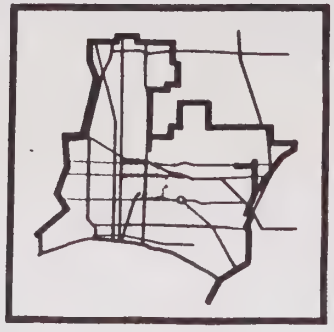


EXISTING DWELLING UNIT DENSITY

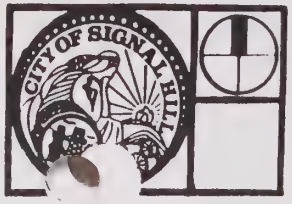
LEGEND

- Under 10 du/ac
- 10-12 du/ac
- 12-15 du/ac
- 15-17 du/ac
- 17-21 du/ac
- 21-25 du/ac
- 25-30 du/ac
- Over 30 du/ac
- Non-residential or vacant

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APPENDIX D
A DISCUSSION OF HOLDING CAPACITY

The land use plan has definite implications for the City's capacity to support a given number of people. This capacity is referred to as "holding capacity" and describes the level of development that could occur within the parameters set by density standards. The most convenient measure of capacity is population, although other measures, such as a dwelling unit count are used.

There are two concepts of holding capacity. One is "maximum theoretical capacity" which assumes complete saturation of the plan at the highest permitted densities in each residential category. The second concept is "effective holding capacity." Under the effective holding capacity concept, calculations not only relate to land use designations and density ranges but also a realistic appraisal of other factors which affect capacity such as development constraints and the size of parcels.

In arriving at current "maximum theoretical capacity" for population growth in Signal Hill, it was necessary to compute and integrate several factors based on the formula below. The analysis took into account all land within a specified residential category.

Formula for Computing Maximum Theoretical Holding Capacity

(Total acres) x (maximum permitted units per acre by residential category) - (average vacancy rates) x (persons per dwelling unit)

At least an 80 percent saturation factor is generally an accepted standard in determining "effective holding capacity" according to the Southern California Association of Government (SCAG). Appropriately, staff established 80% of "theoretical holding capacity" as the point at which realistic holding capacity or "effective holding capacity" would be reached in Signal Hill. This criteria is based on an appraisal of the development constraints in the City which would actually restrict development to less than that shown by maximum residential densities. For example, in some zones the level of development permitted will be based on the size of a lot; smaller lots will be developed at densities substantially less than permitted by maximum dwelling unit density.

THE RELATIONSHIP OF HOLDING CAPACITY TO PROJECTED POPULATION

When projected population closely matches "effective holding capacity", each becomes mutually supportive of the other. Relating population forecasts and holding capacity provides for internal consistency between land use planning and facility planning, and provides for internal consistency within the general plan and its elements. How closely projected population and holding capacity correspond depends in part, on the intent and policies of the jurisdiction involved. For example, a jurisdiction which is already urbanized may have population growth as a goal. To achieve this goal would require the recycling of certain neighborhoods from low density to higher density. In order to realize the amount of recycling necessary to attain the forecasted population growth, it may be necessary to provide some effective capacity above and beyond that necessary to achieve the forecast. This is because other factors may impinge on anticipated development, such as stable developed lots oversized with respect to minimum zoned parcel size or the choice of some builders not to build to maximum permitted density. Conversely, if the goal of a jurisdiction were to preserve the existing development pattern of a given area, little or no excess capacity would be provided.

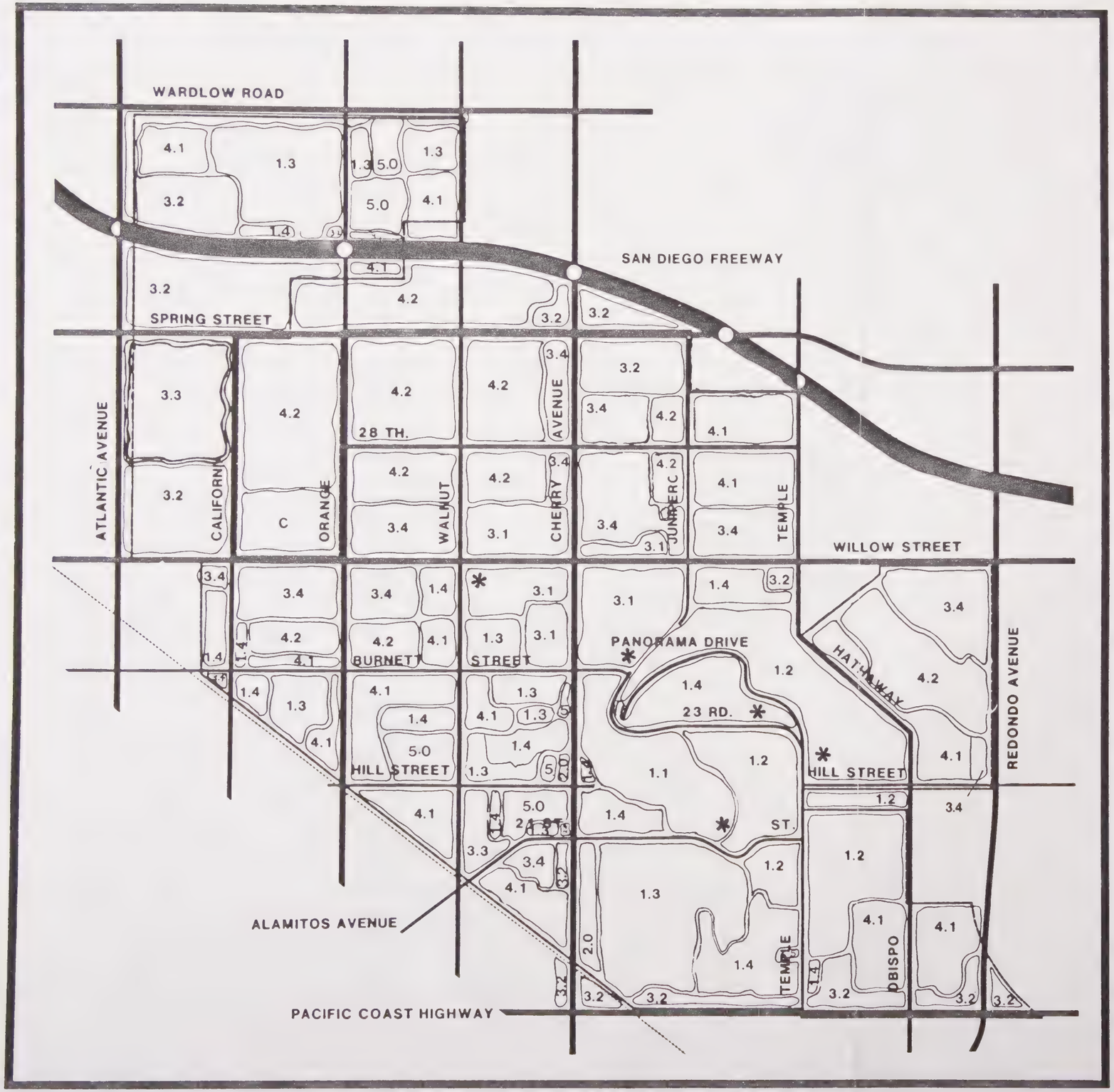
The degree to which plan capacity exceeds existing or projected population is referred to as "overage."[1] Some overage is desirable to make allowance for inevitable small pockets of undevelopable land, to allow for difficulty in recognizing development trends in completely vacant areas, to allow for unforeseen need for public utilities; and to recognize that some owners will maintain their land in an undeveloped state beyond the time span of the plan. The measurement of overage is accomplished through the following formula:

$$\text{Overage} = \frac{\text{Holding Capacity}}{\text{Population}}$$

1. The Southern California Association of Governments (SCAG) has recommended that excess capacity (or overage) should not exceed 20 to 25 percent unless there are special conditions specifically identified in the plan.

Figure 3

PROPOSED GENERAL PLAN LAND USE POLICY MAP



LEGEND

KEY

1.1 VERY LOW RESIDENTIAL DENSITY	up to 5 d.u./acre
1.2 LOW RESIDENTIAL DENSITY	5-10 d.u./acre
1.3 MEDIUM RESIDENTIAL DENSITY	10-15 d.u./acre
1.4 HIGH RESIDENTIAL DENSITY	15-21 d.u./acre

2.0 MIXED USE

3.1 TOWN CENTER

3.2 COMMERCIAL GENERAL

3.3 COMMERCIAL OFFICE

3.4 COMMERCIAL INDUSTRIAL

4.1 LIGHT INDUSTRIAL

4.2 GENERAL INDUSTIAL

5.0 OPEN SPACE

SPECIAL STUDY AREA

* PRECISE/SPECIFIC PLAN REQUIRED

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CITY OF SIGNAL HILL

Housing Element of the Signal Hill General Plan

City of Signal Hill

March 1989

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HOUSING ELEMENT
OF THE SIGNAL HILL GENERAL PLAN

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2/7/86
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I. INTRODUCTION

A. Purpose and Scope

The availability of decent housing and a suitable living environment for every family has been of increasing concern to all levels of government. In California, this concern is most forcefully demonstrated by the California Government Code which requires that each City adopt a Housing Element as a mandatory part of any adopted General Plan, and update it every 5 years to ensure that local housing programs are effectively addressing local and regional housing needs. Cities in Southern California must revise their housing elements by July 1, 1989.

The fundamental purpose of the Housing Element is to provide the City of Signal Hill with a comprehensive set of guidelines for specific decisions related to housing. In keeping with this purpose and the intent of State Housing Element Regulation, the Signal Hill Housing Element addresses: recent population and housing trends, assesses current and forecasted housing needs and constraints to meeting these needs, establishes goals and policies to guide public action, evaluates the effectiveness of the existing housing programs, and identifies a minimum 5-year housing program.

The Housing Element was developed with the combined efforts of City staff, the Planning Commission, and the City Council. The City has also sought a high level of citizen participation throughout the process of the update. Citizen participation was supplemented by coordination and assistance from a number of public agencies. The Element recognizes and includes, as part of its basic framework, many of the issues raised in the following regional and statewide plans related to housing: The California Statewide Housing Element; The Southern California Association of Governments' Regional Housing Element, The 1988 Revised Interim Regional Housing Needs Assessment, and The Area-Wide Housing Opportunity Plan; and The Los Angeles County Housing Element.

B. Legislative Authorization

Section 65302(c) of the California Government Code requires all City and County General Plans to contain a Housing Element as part of the required General Plan. Section 65583 outlines additional information requirements for the Element. Housing

Element guidelines are also detailed under Section 37041 of the Health and Safety Code and are promulgated by the California Department of Housing and Community Development.

Under provisions of Section 65583 of the Government Code, the Housing Element shall include the following:

> "...an identification and analysis of projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement and development of housing. The Housing Element shall identify adequate sites for housing including rental housing, factory-built housing and mobile homes, and shall make adequate provisions for the existing and projected needs of all segments of the community."

C. Relationship to Other Elements

The Land Use Element is the key element of any General Plan because it has the broadest scope of those mandated elements required in a General Plan. It has a direct relationship to nearly all of the other elements of the General Plan. The revised City of Signal Hill Land Use Element is prepared with full knowledge and consideration of the information, policies, and programs contained in the Housing, Circulation, Open Space and Conservation, Social, Seismic Safety and Safety, and Noise Elements of the General Plan. Thus, the Land Use Element plays a central role in synthesizing land use issues identified in the other elements of the General Plan.

In support of the revised Land Use Element, the Housing Element contains policies, objectives, and implementation measures which directly relate to housing issues of other General Plan Elements. Data, issues, and policies reported in other General Plan Elements are specifically addressed in this Housing Element. The Housing Element has also been coordinated to ensure consistency with policies contained in the other Elements.

II. BACKGROUND AND EXISTING CONDITIONS

A. Population and Household Trends

1. Population Growth

The City of Signal Hill, since its incorporation in 1924, has been faced with a unique situation with respect to community development--the majority of the city's undeveloped property has been either owned or had surface rights controlled by oil companies. Population increases in the City have, therefore, occurred as a result of the gradual release of surface rights. As indicated in Table 1, the City's population increased from 3,184 persons in 1940 to approximately 8,423 persons in 1989. Regional population trends, detailing population growth for Long Beach and Los Angeles County are included in the Land Use Element.

TABLE 1

SIGNAL HILL POPULATION TRENDS 1940-1989

Year	Total Population	Annual Growth Rate (Percent)
1940	3,184	---
1950	4,040	2.7
1960	4,627	1.5
1970	5,582	2.1
1980	5,734	.3
1981	5,874	2.4
1982	6,255	6.5
1983	6,973	11.5
1984	7,345	5.3
1985	7,725	5.2
1986	8,025	3.9
1987	8,186	2.0
1988	8,080	-1.3
1989	8,423	4.2

Source: U.S. Census, State Department of Finance, Signal Hill Department of Planning & Community Development Estimates.

Recent analysis by staff indicates a realistic population projection for the year 2000 of approximately 10,070 persons. This represents a 2 percent annual growth rate between 1989 to 2000. The City's population holding capacity will be approximately 11,762 persons with adoption of regulatory mechanisms which reduce permitted densities in the City's residential zones consistent with land use designations shown on Figure 1 and the Land Use Policy Map which is contained in the Land Use Element.

2. Racial and Ethnic Composition

The racial and ethnic composition of the City changed slightly between 1970 and 1980. As evidenced by Table 2, the largest percentage increases have been in the City's black and Asian populations.

Close to 50 percent of the City's black population in 1980 lived in the southwestern portion of the City (west of Lemon Avenue and south of Willow Street). By contrast, the City's Hispanic population was largely concentrated between Cherry Avenue and Redondo Avenue, south of 20th Street.

TABLE 2

RACE AND ETHNICITY OF POPULATION

	1970 Total Population	% of Total	1980 Total Population	% of Total
White	5,054	90.5	4,187	73.0
Black	401	7.2	699	12.2
Indian	44	0.8	62	1.1
Asian	49	0.9	320	5.6
Other	34	0.6	466	8.1
Hispanic[a]	697	12.5	726	12.7
Totals	5,582	100.0	5,734	100.0

a Due to changes in Census design between 1970 and 1980, comparability for the "white" population, the "hispanic" population, and "other" population categories is limited. In 1970 most persons who marked the "other" category and wrote in Spanish designations were reclassified as "white". In 1980 such persons were not reclassified, but remained in the "other" race category.

Source: U.S Census

Figure 1

SIGNAL HILL PLANNING AREA



LEGEND

KEY

1.1 VERY LOW RESIDENTIAL DENSITY	up to 5 d.u./acre
1.2 LOW RESIDENTIAL DENSITY	5-10 d.u./acre
1.3 MEDIUM RESIDENTIAL DENSITY	10-15 d.u./acre
1.4 HIGH RESIDENTIAL DENSITY	15-21 d.u./acre

2.0 MIXED USE

3.1 TOWN CENTER

3.2 COMMERCIAL GENERAL

3.3 COMMERCIAL OFFICE

3.4 COMMERCIAL INDUSTRIAL

4.1 LIGHT INDUSTRIAL

4.2 GENERAL INDUSTRIAL

5.0 OPEN SPACE

SPECIAL STUDY AREA

* PRECISE/SPECIFIC PLAN REQUIRED

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CITY OF SIGNAL HILL

3. Age

The distribution of the City's population by age group between 1970 and 1980 remained relatively stable, although a 5.5 percent increase has occurred in the 25-34 year old age group. As compared to Los Angeles County, the City continues to contain a large percentage of elderly persons (over 65 years old) (see Table 3). Reasons for the City's larger elderly population probably include: Decreased household size, increases in life expectancy, and the relative lack of mobility in housing choice of existing elderly residents who generally cannot afford housing elsewhere and have, consequently, remained in Signal Hill after their children have grown. There may also have been an influx of wealthier empty nesters buying more reasonably-priced condominiums (as compared to Long Beach) in proximity to transportation, medical services, and downtown Long Beach.

TABLE 3

POPULATION BY AGE: 1970-1980

	Signal Hill				Los Angeles County
	1970		1980		1980
Age Category	Total	Percent	Total	Percent	Percent
Under 5	508	9.1	457	8.0	7.4
5 - 9	365	6.5	317	5.5	7.1
10 - 14	265	4.7	259	4.5	7.4
15 - 19	318	5.7	304	5.3	8.9
20 - 24	783	14.0	790	13.8	10.0
25 - 34	936	16.8	1278	22.3	17.9
35 - 44	519	9.3	661	11.5	11.9
45 - 54	562	10.1	573	10.0	10.2
55 - 59	308	5.5	247	4.3	5.1
60 - 64	249	4.4	230	4.0	4.2
65+	775	13.9	618	10.8	9.9
Totals	5,588	100.0	5,734	100.0	100.0

Source: U.S. Census.

A review of more detailed census age information has indicated that the gender balance for seniors is weighted towards females (1.5 to 1) which suggest that one person households at the senior level may represent a special housing need.

4. Household Size

A "household" consists of all the persons who occupy a housing unit, whether or not they are related. As could be expected in a community experiencing population growth, the number of households in Signal Hill is also increasing (see Table 4). Unlike most communities, however, household size has remained relatively stable, only fluctuating slightly from 2.33 persons per household in 1972, to 2.2 in 1980, and increasing to 2.30 in 1988.

TABLE 4

GENERAL HOUSEHOLD CHARACTERISTICS

Population	1970	1980	1983	1988
Population in Households[a]	5,212	5,424	6,689	7,777
Number of Households	2,238	2,470	3,018	3,586
1 Person	698	859	--	--
2 or more Persons	1,419	1,611	--	--
Persons in Group Quarters	370	310	284	303
Persons Per Household	2.33	2.2	2.2	2.30
Households Types				
Family		1,322	--	--
Married		975	--	--
Male/No Spouse		125	--	--
Female/No Spouse		222	--	--
Nonfamily		1,148	--	--
Large Family (5 or more members)		172	--	--
Overcrowded (1.01 or more persons per room)		161	--	--
Minority		620	--	--

a excludes persons in group quarters

Source: U.S. Bureau of Census, California Department of Finance.

5. Income

A major factor which constrains the ability of households to obtain adequate housing is income. Income levels of Signal Hill residents, as a whole, have traditionally ranked below Los Angeles County median incomes. In 1970, Signal Hill median family income was $9,398, or about 85 percent of the Los Angeles County median of $10,970. 1980 Census information continued to reflect this disparity with the City's 1979 median income of $16,267, as compared to the Los Angeles County median household income of $17,563.

While Signal Hills's income levels remain approximately 25 percent below median household incomes in the County, there was a significant change in the distribution of income levels within the City between 1970 and 1980. As shown in Table 5, a substantial increase in households with upper incomes occurred. This can be largely attributed to changing housing market in the City which resulted in the construction of higher priced dwelling units.

Despite a growing number of upper income households in the City, approximately 42 percent of the City's households were classified as very low or low (earning less than 80 percent of the County's Median Income) by the 1980 Census. Areas with very low and low income households are shown in Figure 2. The 1980 Census also determined that 101 (4 percent) of the City's households were below the federally defined poverty level. In addition, over 75 percent of these households consist of families with children. Moreover, 80 percent of those families with children below the poverty level are female-headed households.



FIGURE 2

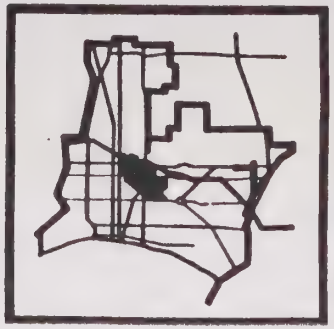
LEGEND

KEY

LOWER INCOME AREAS[1]

[1] **PLANNING AREAS LESS THAN 80% OF THE L.A. CO. MEDIAN INCOME**

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CITY OF SIGNAL HILL

TABLE 5

INCOME CHARACTERISTICS

	1970		1980	
	Number of Households	Percent	Number of Households	Percent
Very Low Income	514	25.0	443	17.96
Low Income	493	22.0	598	24.20
Moderate Income	671	30.0	556	22.30
Upper Income	560	25.0	879	35.60
Totals	2,238	100.0	2,470	100.00

	1970	1980
L.A. County Median Income	$11,091	17,563
Signal Hill Median Income	7,351	16,267
Signal Hill Family Income	9,398	19,015

Very Low Income: Households earning less than 50 percent of the Los Angeles County Median Income.

Low Income: Households earning 50 to 80 percent of the Los Angeles County Median Income.

Moderate Income Households earning between 80 and 120 percent of the Los Angeles County Median Income.

Upper Income Households earning more than 120 percent of the Los Angeles County Median Income.

B. Housing Characteristics

1. Building Trends

As compared to many Southern California cities, construction activity during the 1970s has been relatively modest in Signal Hill. The city averaged approximately 135 new dwelling unit permits per year, of which approximately 94 percent were multiple-family units. Development has primarily occurred in the southeastern portion of the City (between Cherry, Temple, Willow, and 19th). Table 6 provides a detailed account of building acitivity between 1972 and 1983 and also displays a tendency which is indicative of regional and national construction trends; a housing slump in the middle of the decade, followed by a surge of construction, and finally, the more recent recession.

TABLE 6

BUILDING PERMITS ISSUED

	Single-Family Units	Multi-Family Units	Total Units
1983	1	196	197
1982	3	6	9
1981	1	313	314
1980	6	265	271
1979	3	369	372
1978	28	57	85
1977	10	197	207
1976	8	67	75
1975	2	15	17
1974	1	--	1
1973	1	33	34
1972	2	48	50

According to the 1980 census, there were approximately 2,708 housing units in the city. This reflects a net increase of 15.4 percent over 1970 figures. In 1988, the California Department of Finance estimates that there were 3,586 units in Signal Hill. The city estimate for 1989 is 3,816 dwelling units. Table 7 illustrates the number and percentage distribution of housing units within the City.

TABLE 7

HOUSING INVENTORY — TYPE OF UNITS

	1970		1980[a]		1988	
	No. of Units	%	No. of Units	%	No. of Units	%
One-Unit Structures						
Single Family Homes	1,073	44.5	1.064	38.3	1,352	37.7
Mobile Homes	-0-	--	-0-	--	-0-	--
Multiple-Unit Structures						
2-4 Units	631	26.2	759	27.3	742	20.7
5 or More Units	705	29.3	957	34.4	1,492	41.6
Totals	2,409	100.0	2,780	100.0	3,586	100.0

a April 1980 housing count was 2,708; January 1981 estimate by the Signal Hill Department of Planning & Community Development does not include seven (7) additional units which were not considered by the Department of Finance as completed in their estimates.

Source: U.S. Census, California Department of Finance, Signal Hill Department of Planning and Community Development Estimates.

Condominium development has become an increasingly popular form of housing, especially with smaller-sized households as experienced during the 1970s. This trend is influenced by diminishing vacant land, high land and construction costs, and high construction and long term financing interest rates. While this form of housing provides quick returns on investments for developers, with local and statewide trends suggesting a continued sizeable market, care still needs to be taken to ensure a proper balance of housing types, costs, and tenure.

2. Tenure

Housing tenure in Signal Hill is typical in comparison with most cities in the county. In 1970, of the 2,240 units occupied, 545 or 24.3 percent were owner-occupied and 1,695 or 75.7 percent were renter-occupied. This compares to 2,476 occupied units in 1980, of which 676 or 27.3 percent were owner-occupied and 1,800 or 72.7 percent, renter-occupied. The City's minority households exhibited a greater proportion of renters in 1980; 96.3 percent of the City's black households and 83 percent of hispanic households were renters.

The benefits of a substantial rental housing supply include a supply of lower-cost housing amidst very high-cost housing market. This provides the opportunity for a wide variety of people to live in the area. Unfortunately, there are disadvantages which tend to be borne solely by the community in which large rental stock exist. These include: (1) an unusually high incidence of transiency (as compared to other cities); (2) very low citizen participation in public affairs; (3) the major portion of the housing stock owned by a small number of people; and (4) a propensity for more rapid housing deterioration.

An indication of the high turnover in tenancy in the City is provided in Table 8. As shown, approximately 75 percent of persons residing in occupied dwelling units in 1980 moved into their units after 1975. This percentage is even higher for renters.

TABLE 8

YEAR MOVED INTO STRUCTURE

	Total Occupied	%	Renter Occupied	%
1979 - March 1980	958	38.7	810	45.0
1975 - 1978	890	35.9	720	40.0
1970 - 1974	230	9.3	161	9.0
1960 - 1969	202	8.2	76	4.2
1950 - 1959	111	4.5	26	1.4
1949 or earlier	85	3.4	7	.4
Totals	2,476	100.0	1,800	100.0

Source: U.S. Census.

3. Vacancy Rates

Unlike many communities in Southern California, vacancy rates in Signal Hill were unusally high. The 1970 Census reported a citywide vacancy rate of 6.8 percent; increasing to 8.6 percent in the 1980 Census. However, there has been some question as to the reliability of 1980 Census vacancy rates (since counts included those units under construction for which certificates of occupancy may not have been issued by the City). While a utility meter survey of the City conducted in 1983 by the Department of Finance indicated a drop in vacancy rates to 5.57 percent, the City's vacancy rates jumped back up to 7.96 percent in 1984. With the significant amount of residential building activity going on in the City since 1980, and the restrictive financing market, there are a substantial number of newly completed units which are unoccupied (according to the 1980 census, 14.1 percent of condominiums), which might explain the significant fluctuations in vacancy rates from year to year. The 1987 vacancy rate in Signal Hill is at 2.8 percent[1]. This is largely due to the occupation of the completed units in the past year.

In the State's Housing Element Manual, a rental vacancy rate of 6 percent approximates the number of moves made by renters on a monthly basis. In housing

1 1987 Federal Home Loan Bank Board Statistics.

for sale, a vacancy rate of 2 percent approximates the number of moves by owners on a monthly basis. If vacancy rates are high, there is a strong potential for residential deterioration. If rates are too low, the price of housing increases and housing choice is diminished. Assuming 1980 renter-owner proportions remain the same, the "ideal" vacancy rate of Signal Hill can be determined by multiplying the homeowner percentage (27.3 percent) by 2 percent, and the renter percentage (72.7 percent) by 6 percent, and adding the products:

$$(.273 \times .02) + (.727 \times .06) = .00546 + .04362 = .04908 \text{ or } 4.9\%$$

4. Age

The age of a structure has a significant determinant of its physical condition. Under proper maintenance conditions , a structure will begin to exhibit minor physical deficiencies approximately 25 years after construction; major physical defects will become apparent approximately 40 years after construction. As shown in Table 9, 1980 census data indicates that over half of the City's housing stock is over 20 years old.

TABLE 9

AGE OF HOUSING STOCK

Year Structure Built	Total Housing Units	Percent	% of Owner Occupied Units	% of Renter Occupied Units
1980 - 1988	1,086	30.3	4.8	2.5
1970 - 1979	393	11.0	14.6	12.7
1960 - 1969	712	19.8	27.8	34.6
1950 - 1959	440	12.3	15.8	18.6
1940 - 1949	436	12.2	16.8	16.2
Pre 1940	519	14.5	20.2	15.4
Total	3,586	100.0	100.0	100.0

Source: U.S. Census, California Department of Finance.

5. Housing Condition

The Southern California Association of Governments (SCAG) Draft Regional Housing Needs Assessment Model determined that 19.4 percent of the City's housing stock is suitable for rehabilitation. SCAG also identified 8.5 percent of the City's total units are in need of replacement or demolition. These SCAG estimates appear to significantly over-estimate the number of housing units in need of replacement. An exterior condition survey of Signal Hill's[2] housing stock in 1980 indicated that only 13 single family homes and 26 multiple-family units in the City appeared dilapidated. Although a windshield housing survey is not an accurate survey of housing conditions, the housing data it provided on the number of dilapidated units also appears to be supported by more recent 1980 Census information which indicates that only 41 units in the City lack plumbing facilities for exclusive use. A general location of those areas of the city identified as containing the condition of slum or blight is shown in Figure 3. Those areas defined in this category are consistent with definitions provided by California Redevelopment Law, as prescribed by the Los Angeles Community Development Commission for Community Development Block Grant participants, and adopted by Resolution of the Signal Hill City Council.

6. Size

The size of residential units (number of rooms excluding bathrooms, halls, and closets) is an important factor is assessing whether the housing stock adequately accommodates the City's population. The median size of a residential unit in the city (four rooms) adequately accommodate the average household in Signal Hill (2.30 persons per household). Nonetheless, 161 households or 844 persons, in 1980, lived in overcrowded households; 74 households (45 percent) had in excess of 1.50 persons per room (severe overcrowding). Of the overcrowded households 86.5 percent were renter-occupied units and 13.5 percent were owner-occupied.

7. Housing Costs

Housing costs in Signal hill have increased commensurate with those of surrounding communities. In 1980, the median value of an owner occupied home in the City was

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2 Performed by Hayworth, Carroll and Anderson

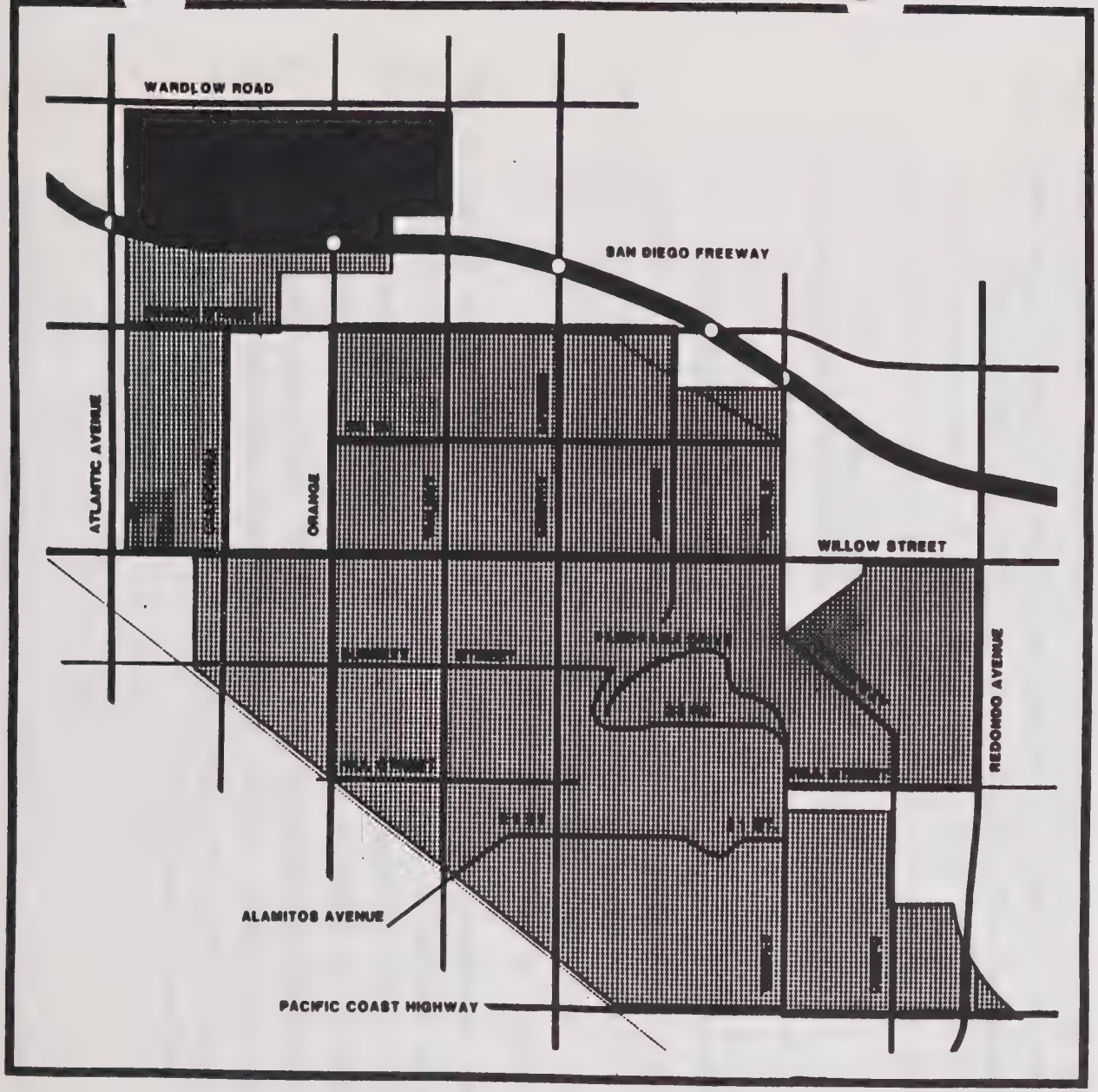


FIGURE 3

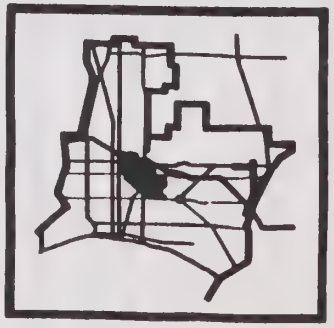
LEGEND

KEY

SLUM AND BLIGHT AREAS

AREAS OUTSIDE SLUM AND BLIGHT

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$75,500 and the median rent being paid by renters was $252 per month. Owner occupied housing values were the lowest in the southwest area of the city at a median value of $51,300 and the highest in the "hill" area with a median value at $183,500.

A recent survey indicated that new owner-occupied dwelling units were available in a wide range of prices (approximately $110,000 to $200,000+), and every area in the City had a fair mix of prices. A recent survey of monthly rents in the City ranged from $350 for a "single" to $650 per month for a two bedroom. This is lower than rents in many surrounding neighborhoods in Long Beach. It appears that most rental costs in Signal Hill are still within the economic means of most residents. Using 1987 HUD income estimates, the median income household containing four people could afford a rent of $830 per month. Low income households could afford $663 and very low income households $449. Table 10 shows Fair Market Rents which Department of Housing and Urban Development will assist eligible lower income households to occupy. Most rents in Signal Hill fall within these rents.

TABLE 10

LOS ANGELES URBAN COUNTY
LOW AND MODERATE INCOME AFFORDABLE RENT SCHEDULE

Number of Bedrooms		0	1	2	3	45 or more
Maximum Rent	$443	$530	$616	$789	$892	Add 15% Monthly to the 4 bedroom rent for each additional bedroom.

As an indication of the affordability of Signal Hill's owner occupied housing, the 1980 median income for the City can be compared against the City's 1980 median home value. Using the Department of Housing and Urban Development standard that a household can afford to purchase a unit worth three times its gross annual income, a household earning the median income of $16,267 could theoretically afford to spend $48,801 for a home. This is well below the City's median home value of $75,000. To purchase a home at the City's 1980 median value, household income would have had to have been at least $25,175.

The 1980 Los Angeles County median income of $17,563 sets the level of housing overpayment at $4,391 (25 percent of the median income). Signal Hill's overpaying households numbered 678 in 1980. Assuming the same proportions as the 1980 census, SCAG projected housing overpayment for 1988. Low income households that pay 30 percent or more for housing is estimated at 724. Of these, 462 households are in the very low income category and 262 are in the low income category; 657 are renters and 67 are homeowners (see Table 13).

C. Labor Force Characteristics

Employment factors strongly influence the housing market in terms of local and regional housing demand and distribution, housing costs, and housing types. An adequate supply and balance of jobs accessible to residences, can lower the cost of housing, create shorter commutes (and, thereore, less need for transportation facilities), and result in better distribution of public revenues, and increase energy savings. For these reasons, current and expected increases in manufacturing and commercial development in Signal Hill, as well as the City's proximity to major employment centers such as Long Beach and downtown Los Angeles, is an extremely positive attribute.

Signal Hill had a total civilian labor force in 1980 of 3,037 persons and an average unemployment rate of 5.2 percent, compared to 6.1 percent for Los Angeles County. The City's civilian labor force is expected to increase to approximately 4,195 by 1989, given a population of approximately 7,950 persons and a labor force participation rate of 53 percent. 1980 Census information shown in Table 11 also indicates that a large percentage of the City's population commute within the Standard Metropolitan Statistical Area (SMSA). Mean travel time is approximately 23 minutes.

TABLE 11

EMPLOYMENT COMMUTING PATTERN 1970 - 1980

	1970		1980	
Commute	Number	% of Total	Number	% of Total
Inside SMSA				
Central City	84	3.5	1,431	58.0
Remainder	2020	84.0	1,039	36.3
Outside SMSA	86	3.6	27	.9
Not reported	215	8.9	366	12.8
Totals	2,405	100.0	2,863	100.0

Table 12 illustrates that Signal Hill's labor force in 1980 was primarily concentrated the manufacturing and service industries. Of those employed 56 percent were engaged in white collar occupations.

Additional information of Employment is contained in the Land Use Element. Approximatelly 4,355 new permanent jobs will be created in the City at buildout of the Land Use Plan.

TABLE 12

INDUSTRY AND OCCUPATION OF EMPLOYED RESIDENTS IN SIGNAL HILL

Employment Classification	1980 Total	1980 Percent	1988 Total[a]
Industry	2879	100.0	3977
Agriculture	70	2.4	96
Construction	176	6.1	244
Manufacturing Non-Durable	158	5.5	219
Manufacturing Durable	610	21.2	844
Transportation	134	4.7	185
Communications	94	3.3	131
Wholesale Trade	175	6.1	241
Retail Trade	340	11.8	469
Finance	163	5.7	225
Business/Repair	179	6.2	247
Personal	112	3.9	155
Professional Health	304	10.6	419
Professional Education	133	4.6	183
Professional Other	123	4.3	170
Public Administration	108	3.6	149
Occupation	2879	100.0	3977
Managerial Administration	339	11.8	468
Managerial Specialty	344	11.9	476
Technical/Sales Technicians	72	2.5	99
Technical/Sales Sales	264	9.2	364
Technical/Sales Clerical	568	19.7	785
Service Private House	15	.5	21
Service Protection	22	.8	30
Service Other Service	279	9.7	385
Farming/Forestry	31	1.1	43
Craft/Repair	508	17.6	702
Operator/Laborer Assemblers	170	5.9	235
Operator/Laborer Transportation	202	7.0	279
Operator/Laborer Laborer	65	2.3	90
Occupation Class	2879	100.0	3977
Private Wage	2234	77.6	3084
Federal Employee	105	3.6	146
State Employee	74	2.6	102
Local Government	253	8.8	350
Self-Employed	213	7.4	295

a Based on straight line projection. Employment labor force is greater than 16 and less than 64 years old.

III. NEEDS AND CONSTRAINTS

A. Needs

Needs establish the foundation for defining goals and formulating policies and implementation approaches. Housing needs are discussed in the context of the following factors: (1) the local share of regional housing needs; (2) special housing needs; (3) maintenance of existing units; (4) rehabilitation or replacement of substandard housing; (5) neighborhood quality; (6) housing opportunity, and (7) energy conservation.

1. Local Share of Regional Housing Needs

The City's existing housing needs and its expected share of regional housing needs is defined by the Southern California Association of Governments (SCAG) pursuant to Section 65584 of the California Government Code. These housing needs are summarized in Table 13.

Current needs shown in Part I of Table 13 indicate that 726 low and very low income (those under 80 percent of the County's median income) households are paying 30 percent or more of their gross income on housing. Since there are 28 lower income households in the City currently receiving housing assistance through HUD's existing Section 8 Rental Program, the City's total adjusted 1988 need is 698 units.

Future needs are defined as the number of units each city must add to accommodate its fair share of expected regional growth. To meet the City's 1994 demand for housing, approximately 419 units will be needed between 1989 and 1994. To replace units in needs of demolition, alleviate overcrowded conditions, and keep pace with population change, SCAG suggests that an appropriate annual goal would be the construction of at least 84 dwelling units between 1989 and 1994. This minimum output should be sustained consistent with the ability of the City to provide necessary services, even if only a small percentage of local and regional housing needs are to be met.

To account for the needs of all income groups of the population, the City must also attempt to address an appropriate distribution by price and income ranges for future construction based on the information contained in Part II of Table 13.

TABLE 13

HOUSING NEEDS 1988-1994
CITY OF SIGNAL HILL

RHNA Summary Table

Part I — Current Needs and General Information

1.	Total Households[a]	3,376
2.	Total Housing Units Occupied	3,586
3.	Unoccupied Units (Line 2 - Line 1)	210 (5.86% vacant)

		Total		Owners		Renters	
		Very Low	Low	Very Low	Low	Very Low	Low
4.	Households in need (lower income households paying over 30% of income for housing, from 1980 census)	462	262	42	25	420	237

Part II — Future Needs (7/89 to 7/94)		Total	Very Low (0-50%)	Low (50-80%)	Moderate (80-120%)	Upper (Over 120%)
1.	1994 Households	3,960				
2.	1989 Households	3,606				
3.	5 year Growth in Households (line 1 - line 2)	354				
4.	1994 Market Vacancy Goal	33				
5.	1989 Market Vacancy Need	19				
6	Vacancy Surplus or Deficit (line 4 - line 5)	14				
7.	1989-94 Expected Units Lost from Stock	32				
8.	Future Housing Unit Needs For All Income Groups, Adjusted to Avoid Impaction	419	84	92	71	172
9.	Special Income Group Need for High Cost Areas (Number of Households with Annual Incomes Over 120% of Median for Jurisdiction), but Below What's Needed to Purchase Median Priced Home.	628				

		Owner %	Renter %	Single Family	Multiple Family
10.	Tenure and Building Type Splits of 1989 Housing Stock	28.85	71.15	36.34%	63.36%
11.	Farmworker Households Eligible for assistance	5			

a 1988 California State Department of Finance.
Source: SCAG.

In an effort to create a greater balance between renter and owner-occupied dwelling units, emphasis in new construction should be placed on homeownership opportunities with actions taken to ensure the maintenance of the City's existing rental supply wherever possible.

2. Special Housing Needs

Information on special housing needs has been assembled from the 1980 US Census and from more recent regional studies. Special housing needs include the needs of population groups with special housing requirements, including the homeless, first-time buyers, minorities, elderly, handicapped, small and large families, and female headed households.

a. Homeless

The homeless population has steadily increased over the past few years, with Los Angeles' share growing faster than the rest of the nation. The causes of homelessness have been identified as: (1) a program to deinstitutionalize the mentally ill that did not include community services to integrate them into society; (2) the lack of sufficient low cost housing; (3) a growing economy that has squeezed out the low-wage earner from the labor market; and (4) social maladjustment.

Recent media attention has exposed the extent of the problem. A regional study shows that of the 30,000 to 33,000 homeless individuals in the County, less than 60 percent are accommodated by exisitng social service facilities and programs. An attitude of apathy combined with the difficulty of finding sites for shelters and low cost housing, has limited the response to the problem.

In July 1987 and January 1988, the federal and state legislatures approved aid to the homeless. This represents official recognition of the crisis and agreement that short term solutions or any one program cannot end homelessness. The needs of the homeless population should be addressed at several stages through programs for prevention, assistance and transition at the national, state and local levels.

Signal Hill is estimated to have between 5 and 25 homeless (based on a field survey by the Signal Hill Code Enforcement) individuals in the city on any given day. The

City has implemented limited programs to deal with the issue. A crisis intervention/ human services program coordinator has been hired. Among other duties, this person will advocate the needs of the homeless population and coordinate government and volunteer programs aimed at solving homelessness. In addition, the coordinator will recommend policies and programs for the City's homeless services and tap private and government funds for these programs.

The lack of affordable housing is one of the primary causes of homelessness. Signal Hill has mounted efforts to improve the supply of low and moderate priced housing. This has been coupled with the renovation and maintenance of the existing housing stock. Condominum conversions have been curtailed by local ordinance by permitting the conversion of apartments only when an equal number of rental units are developed in the preceding year.

While the City is not interested in administering social service programs, a transitional or emergency housing program could provide temporary shelter to the homeless including beds, meals, showers and lavatories. To facilitate the homeless' reentry into the larger society, educational/training programs, job and apartment referrals, counseling and health care services should be initiated together with the temporary lodging facilities. If the City joins with neighboring communities, the program could support several shelters to accommodate the different homeless groups; individuals, as well as families, the inebriate and the mentally ill, the elderly and the handicapped or one larger facility with a flexible interior design. The City considers all multifamily and commercially zoned property potentially suitable for emergency shelters, and the crisis intervention/human services program coordinator will work with shelter providers to identify appropriate sites.

Signal Hill could also institute one of several innovative schemes used by the City of Long Beach to answer the homelessness problem, such as Adopt-a-Family and Adopt-a-Home. These programs offer subsidized rents to the homeless or the near homeless, on a case by case basis. Funds are provided by private individuals, non-profit organizations, and corporations.

b. First-time Buyers/Affordability

Housing affordability has become a primary housing problem over the past years in Southern California with average home prices increasing more than 300 percent since 1970. This trend is a result of increasing costs of materials, land and labor, the difficulty and expense of financing, and restrictive development controls. These factors have also reduced the availability of sites, and spurred a speculative climate that has attracted investors to buy property as a hedge against inflation. In the meantime, income levels since 1970 have only grown 70 percent. The implications of this tremendous disparity in income and housing cost growth rates is an increasing number of persons unable to find affordable housing. Although lower-income households have been hardest hit, even middle-income households, especially first-time buyers, are now finding it difficult to find affordable housing. Often their biggest need is assistance in making the large down-payment on a home or rent deposit on an apartment. The City could use redevelopment funds to make loans for this purpose.

c. Other Special Housing Needs

The housing choice of minorities, the elderly, handicapped, many small and large families, farm workers and female headed households can be restricted by the lack of units designed for their special needs. For example handicapped residents may need special handicap ramps for accessibility, lower counters, wider doorways and special fixtures within reach (i.e. light fixtures; door fixtures; door handles, plumbing fixtures, work surfaces). Traditionally their choice has been further hampered by their low income. Although difficult to quantify individually, Table 14 contains additional information about groups in the City who may experience special housing needs.

TABLE 14

SPECIAL HOUSING NEEDS

		Totals	Percent[a]
1.	Total Population	5,734	
	Persons Over 65 Years	618	10.8
	Handicapped		
	Work Disability	120	2.1
	Not in Labor Force	216	3.8
	Prevented from Working	176	3.1
	Farmworkers	31	0.5
2.	Total Households	2,470	
	Minority	620	25.1
	Female Headed	222	9.0
	With Children	(158)	(71.2)
	Below Poverty	(68)	(30.6)
	One Person Household	859	34.8
	Five or More Persons	172	7.0
3.	Total Dwelling Units	2,708	
	Units with 1.01 persons per room	161	5.9
	Units Lacking Plumbing	49	1.8

a Percentages will not total 100 because groups and households may have one or more special needs.

Source: 1980 Census.

3. Maintenance of Existing Units

Even with normal maintenance, a large number of the City's older housing units are beginning to show signs of deterioration. Early signs of deterioration include unkempt yards, spot maintenance problems, and neglect, such as buckled screens, broken windows, peeling paint, and cracked driveways. Although the current market is generally promoting routine maintenance and improvement of the housing stock, there are areas of the city that fail to be effectively rejuvinated due to circumstances, such as absentee ownership, apathy, etc. The large number of older units and high incidence of renter occupancy merits special care to ensure that proper maintenance is undertaken to conserve existing housing units in a safe, sanitary, and habitable condition.

4. Rehabilitation or Replacement of Substandard Housing

As indicated in the Housing Background Section, the most recent Housing Assistance Plan adopted by the City indicates that approximately 695 units are substandard, 44 percent of which are suitable for rehabilitation. While these figures may overestimate the actual number of physically substandard housing units (especiallly those in need of replacement), rehabilitation shall be encouraged whenever appropriate.

5. Promotion of Neighborhood Quality

Neighborhood quality is a primary factor that persons consider in choosing a place to live. To a great extent, the future of the City is tied to the continued quality of its neighborhoods. The lack of strong neighborhood identity, peaceful and safe surroundings, adequate public facilities and services, and protection against such adverse environmental conditions as air and noise pollution, traffic, visual blight, and other health hazards can contribute to the unattractiveness of a neighborhood and act to encourage social and economic decline. Residents responding to a community survey have indicated that they are very concerned about residential appearance. They want to improve the run-down areas of the City.

6. Expansion of Housing Opportunity

Lower income and special need households are least able to compete in the City's housing market. They pay a considerably larger percentage of their income on housing and are generally restricted to areas of the city where housing is aged and of poorer quality. Equal access and opportunity are essential in assuring that adequate and affordable housing is secured by all, especially lower income and special need households.

7. Energy Conservation

Residents of Signal Hill enjoy a quality of life which is, in large part, made possible by the consumption of energy resources. As non-renewable energy resources continue to be depleted and energy costs continue to rise, more attention needs to be

paid to energy conserving measures, primarily as a means to offset and control the rising costs of fuel.

The City Planning Commission has investigated potential energy efficiencies applicable to the City and has resolved to encourage energy conservation and the use of solar energy. When discretionary approval of the Planning Commission is required, special consideration will be given to attractively designed development proposals committed to energy conservation, the use of solar energy for space and water heating, and site designs which protect solar access. There are also numerous energy-conserving devices which can be retrofitted onto exisiting and older housing to conserve the use of energy and ultimately save money. While conservation is important, special attention should be given to ensuring that energy conservation requirements or incentives do not result in making housing less affordable.

B. Constraints

Before effective and efficient actions can be formulated to address housing needs, one must understand private and public factors which operate to restrict housing opportunities. These private and public constraints influence the production and rehabilitation of housing to meet specified needs. While many factors, particularly within the private or market sector, are beyond the control of local governments, certain factors can be influenced by strong local program efforts.

Private Constraints

1. Land Availability

One of the most important factors (and greatest potential limitation) in the development of new housing in Los Angeles suburbs is the availability of developable vacant land. A major constraint in the City of Signal Hill, however, is not the amount of vacant land but its useability. In 1984, approximately 416 acres or 31 percent of the City's total acreage was vacant (see Table 15). With over 185 acres of the 352 acres of land zoned as residential in the City vacant, approximately 50 percent of this vacant residential land is either owned by or has it surface rights controlled by oil companies. A significant amount of this land is also located in areas with slopes of 20 percent or more. These constraints reduce the

number of dwelling units that realistically can be developed. Since many development sites contain remnant oil pumps, pipelines and abandoned drill holes, site preparation costs in the City are generally quite high. Nonetheless, there are adequate land resources available to accommodate the City's future housing needs in a variety of housing types.

TABLE 15

LAND USE, 1984

Land Use	Acres	Percent
Residential	200.81	14.66
Commercial	80.78	5.90
Industrial	338.45	24.71
Quasi-Public/Public	59.52	4.34
Vacant/Open Space	430.84	31.45
Net Total	1,110.40	81.06
Streets	259.51	18.94
Total	**1,369.91**	**100.0**

Source: Signal Hill Department of Planning and Community Development.

Table 16 indicates the amount of acreage available, the planned dwelling unit density and the City's Year 2000 dwelling unit capacity based on the Land Use Element of the General Plan.

TABLE 16

RESIDENTIAL LAND USE PLAN

Residential Category	Acreage	Dwelling Unit Density/Acre	Dwelling Capacity
Very Low Residential	30	1-5	30-150
Low Residential	126	5-10	6300-1,260
Medium Residential	108	10-15	1,080-1,620
High Residential	108	15-21	1,620-2,268
Total	**372**		**3,360-5,298**

Large vacant areas available for development are identified on Figure 4.

Adequate land resources are available to accommodate the City's projected 1994 housing needs. However, the City will reach build out in the foreseeable future which will limit housing stock growth because of limited site availability. A major portion of the City is also located in Signal Hill Redevelopment Project Area No. 1. The Project Area identified in Figure 1 of the Land Use Element consists of approximately 840 acres or 61 percent of the City's total land area. Although a major portion of the Project Area is vacant, there are a significant number of developed properties which could be redeveloped. State law requires that 20 percent of the tax increment from redevelopment be used to increase the supply of low and moderate income housing. Because the Signal Hill Redevelopment Agency has committed its funds to other projects and the redevelopment project area was established prior to 1977, funds are not available nor is the agency required to fund low and moderate income housing until 1996. However, the agency must consider the 20 percent set aside a nonfunded debt beginning in 1989. Consequently, the City intends to develop alternative strategies for providing housing using these funds. The alternatives will be prepared for Council consideration in 1990-91. Depending on the programs selected, this could lead to an increase in the City's total housing supply after 1996.

2. Increasing Costs of Supplying Housing

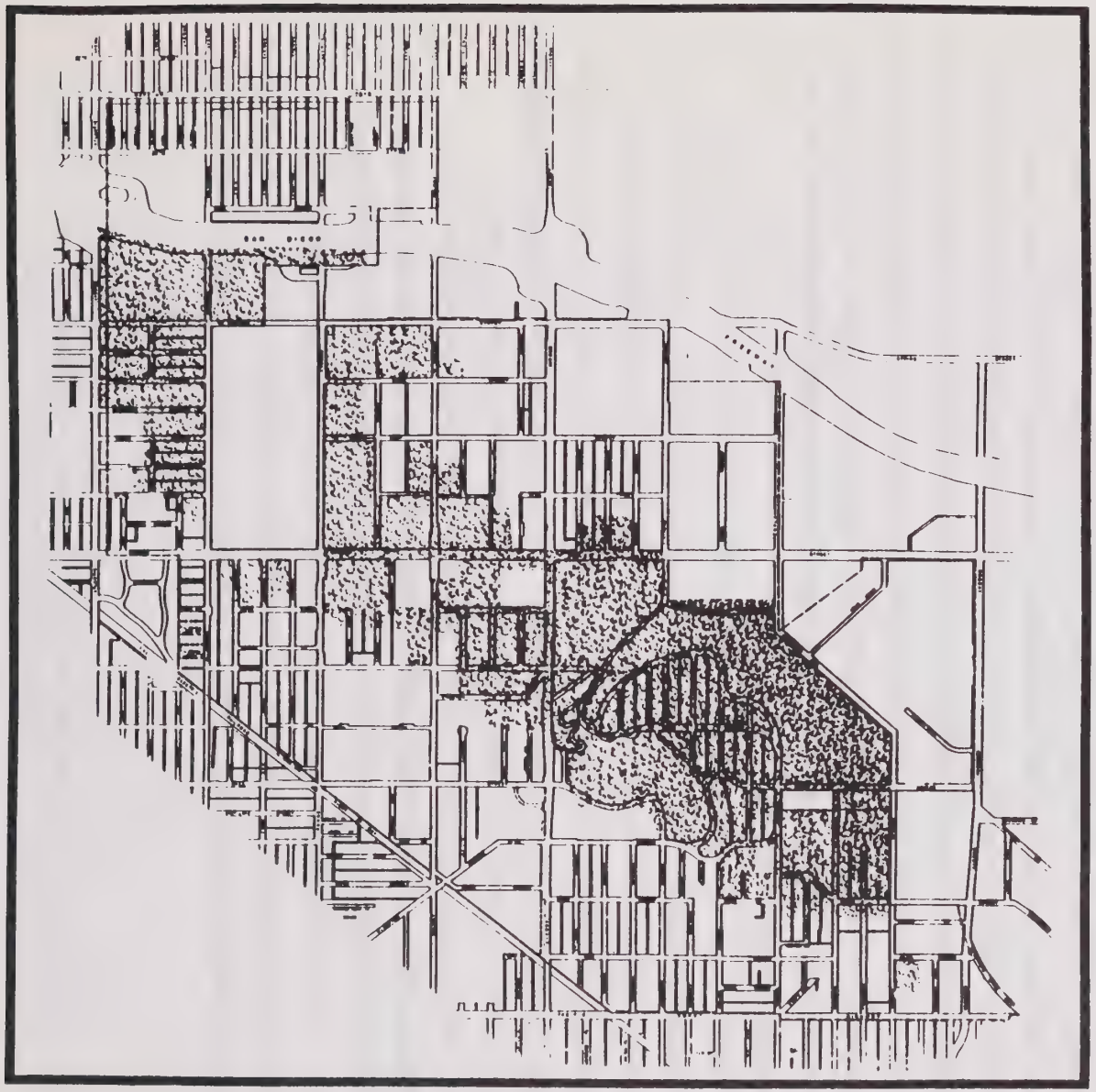
Production cost factors such as land acquisition and improvement, construction materials and labor, financing, overhead, fees and profit, are market constraints which can severely impact the affordability of housing.

a. Land and Improvement Costs

The primary costs associated with land include its acquisition or market price and the level and type of improvements necessary. These costs usually are 20 to 25 percent of the final sales price and sometimes up to 35 percent for more expensive property. The price of vacant residential land in Signal Hill varies significantly depending upon location, with some properties on top of the hill commanding prices of over $25.00 per square foot.

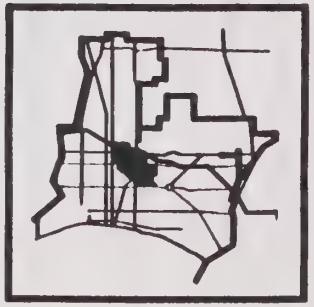
Figure 4

VACANT LAND



LEGEND

Vacant and Oil Producing Land



SCALE

0 400 800 1200 2000

CITY OF SIGNAL HILL

b. Construction Costs

Construction costs vary significantly based on the type of development. While there is room for wide variation depending on the quality of a development, current construction costs average $50 to $75 per square foot for a single-family house and $40 to $50 per square foot for a multiple-family dwelling. Manufactured housing is, in most cases, less costly than conventional construction, averaging approximatelly $33 per square foot.

c. Financing Costs

Financing costs dramatically affected housing costs in the early 1980's. With inflated interest rates, alternative forms of mortgage subsidies were necessary to reduce monthly payments and down payment requirements (variable interest rates, "creative" financing, balloon payments on second and third trust deeds, etc.) From 1987 to 1988, interest rates dropped below 10 percent for conventional fixed-rate mortgages, however, most forecasts predict higher rates at the end of the decade. The increased closing and down payment costs remain an obstacle to many households seeking home ownership.

d. Profits

Profits are not directly influenced or controlled in the City. However, they are normally calculated on a percentage basis. Therefore, implementation of production cost reductions will mean a lower dollar cost attributable to raw profit.

The amount and percent of raw profit is subject to variation. In the case of single-family detached housing, it has been found that profits ranged from 10 percent to 15 percent. For townhouse and condominium units, the profits may range from 8 percent to 10 percent. Profits can exceed these levels particularly when economic conditions create a "seller's" market. During such times, profits exceed 20 percent.

3. Speculation

Speculation by investors in the housing market may cause prices to rise rapidly and thereby decrease housing opportunities for lower and moderate income residents. The high percentage of renter-occupied condominiums in Signal Hill is evidence to this investment or speculation trend. Unfortunately, it can create obstacles to maintenance, preservation, and rehabilitation efforts for projects with many absentee owners.

4. Income Generation

Inflation in the cost of goods and, particularly housing, means that many working people find themselves unable to afford a decent home. The lack of sufficent income causes people to work more jobs or find more working people to share the cost of a home. As a result, overcrowding is encouraged and the housing choice of many households severely restricted. The situation is further aggravated in periods of high unemployment.

5. Racial and Economic Discrimination

Racial and economic discrimination has a direct affect on housing opportunity and results in the concentration of minorities and lower-income households. Often discrimination is subtle and difficult to document (as in the case of "redlining").[1]

Public Constraints

Public constraints, such as land use and development controls, site improvement fees and permits, affect the supply, distribution, and cost of housing. In general, these restrictions are intended by local government to protect the community's health, safety, and welfare.

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1 "Redlining" -- areas in which lending institutions will not loan due to high loan risks, poor neighborhood quality, and other signs of decline.

1. General Plan and Community Goals

Current citizen desires and views indicate that there is concern about multifamily development in the City. There is a lack of popular support for substantial increases to the city's housing stock. Development of new units in areas planned for growth can be excepted. However, the General Plan supports the community's desire for balanced residential growth that is significantly lower in density than previously envisioned. The establishment of areas for lower density development may result in less but larger dwelling units. This will mean increased housing costs and rents, and may represent a constraint to the development of affordable housing.

2. Land Use and Development Regulations

The Signal Hill General Plan and Zoning Ordinance provide the basis for guiding development in the City by directing the location, type and density of housing and other land uses. Specifically, zoning ordinance regulations, such as building height (25 feet), yards (10 to 20 feet), and parking (two per dwelling unit) act as constraints to affordable housing, but are necessary to maintain public safety and community aesthetics. However, land use controls should be periodically reevaluated to respond to changing community needs. Outdated land use controls can increase development costs when they tend to counter the efforts of the private sector in responding to the market demand. The General Plan was revised in 1986 and the Zoning Ordinance, in 1987. Periodically, the City adopts the latest (1987) Uniform Building Code. Local amendments are limited to fire sprinkler, alarm, and security standards for multiple-family type development. These additional building standards may add to the cost of providing new housing but are necessary to assure safe living environments.

3. Local Services and Facilities

The majority of the necessary infrastructure in Signal Hill, such as streets, lighting, sewer, and water are present in the older, flat areas of the city. However, due to the age of many of those improvements, they may be substandard and in need of upgrading. The hilltop, hillside, and oilfield areas have very little infrastructure. Developers will be responsible for the provision of improvements, i.e., curbs, gutters, sidewalks, sewers, waterlines, street lights, where they may be lacking or in need of replacement. The cost of land improvements will normally be comparable to

undeveloped semi-rural areas because of the need to correct poor soils, abandoned oil wells, and relocated oil pipelines. The City may waive public improvement requirements for those projects providing "affordable" housing.

4. Local Permit Approval Processes and Fees

Signal Hill's development review process may place constraints on the provision of housing. Since the City conducts a comprehensive site plan and design review of all development projects, local permit approval processes and fees for a zone change, conditional use, site plan, or environmental review, subdivision, and other applicable processes add to the cost of housing construction. Additional zoning restrictions are also expected to be implemented in response to policies and programs recommended in the Land Use Element. Many of these requirements are mitigation measures that are necessary to reduce land use conflicts or protect residents of hillside areas.

Rising fees are a direct result of Proposition 13. Cities can no longer afford to "carry" projects, as has been done in the past. Building and other development fees reflect the actual costs of performing services (i.e. planchecking). In addition, the City's current processing time for development approvals is relatively short, with fees much less than those in surrounding communities based upon a staff survey. Table 17 contains the City's current processing times and fees. "Fast-tracking" (preferential scheduling) or fee waivers for critical projects such as those providing "affordable" housing is provided by local code.

TABLE 17

CITY OF SIGNAL HILL LOCAL PLANNING PERMIT PROCESS

Application	Processing Time (in Weeks)	Application Fee
Conditional Use Permit[a]	6-8	$ 350.00
Variance	6-8	325.00
Zone Change[b]	7-12	400.00
General Plan Amendment[b]	7-12	400.00
Zoning Code Amendment[b]	7-8	350.00
General Plan Amendment & Zone Change [b]	14	800.00
Tentative Parcel Map	7-12	500.00 + 25.00 per lot/unit
Tentative Tract Map	7-12	500.00 + 25.00 per lot/unit
Site Plan Review[c]	6-8	125.00[d]
Initial Study	1	75.00
Environmental Assessment -- Negative Declaration	1-2	45.00
Environmental Impact Report	12	525.00 + Costs
Lot Line Adjustment	1	225.00
Lot Merger	1	225.00

a May require City Council approval; add approximately 3 weeks.
b Requires City Council action.
c Provided developer submits all required/accurate information.
d For projects requiring Planning Commission action.

Source: Signal Hill Department of Planning and Community Development.

5. Political Constraints

Political constraints may impede the provision of housing opportunities. A city may choose to balance its housing goals with its environmental quality and growth management goals. Constituency pressure, at times, can oppose housing assistance and hinder the implementation of housing programs. Whenever the subject of housing subsidies or low and moderate income housing is discussed, many people become concerned with the potential impact of such programs on property values, the local budget, and the residential environment in general. These concerns often stem from the misconceptions that proposed housing for persons and families of low and moderate income will either be of the old "public housing project" variety, or will be substandard in construction, design or appearance. Low income housing is described

as housing for households earning less than 80 percent of the Los Angeles County Median Income (see Table 18). By definition, half of the households in the County currently earn less than the Median. Past experience in other communities indicates that the best way to overcome these concerns is a public education program coupled with successful pilot projects. Design standards for lower income housing should also be consistent with those accepted and used by the community.

TABLE 18

1987 INCOME CRITERIA FOR LOWER INCOME HOUSING LOS ANGELES COUNTY

No. of Persons In Household	Maximum Annual Income: Low Income Household	Maximum Annual Income: Very Low Income Household
1	$18,600	$12,550
2	21,250	14,350
3	23,900	16,150
4	26,550	17,950
5	28,200	19,400
6	29,850	20,800
7	31,550	22,250
8	33,200	23,700

Source: U.S. Department of Housing and Urban Development.

6. State and Federal Housing Programs

State and federal housing programs, although intended to assist in local housing provision, may actually impede implementation of Housing Element goals and policies. Many cities have resisted participation because programs are complicated, short-term and under-funded. The current Federal Administration has contributed to the uncertain future and inadequate funding for housing programs. As a result, there may not be an adequate, predictable and steady flow of capital to deal with those aspects of a housing program which are beyond local capability. This is particularly true given federal budget cuts and income tax modifications which will severely impair the City's ability to cooperate with private developers in making affordable housing available.

7. Article 34 of the California State Constitution

This legislation requires that a referendum of public vote be held to approve publicly owned low rent housing projects"...developed, constructed, or acquired in any manner..." by any state public body (e.g., a city). In practical terms, Article 34 has been interpreted to mean that if a low cost housing proposal is publicly owned, or is tax exempt, or if 50 percent or more of the units are reserved for low and moderate income families, a referendum is required. If, on the other hand, a project receiving direct or indirect financing is to be privately owned, not tax exempt, and has less than 50 percent of its units set aside as low cost houisng, no Article 34 referendum is required. Failure to pass a referendum bars a jurisdiction from using traditional public housing, state housing, agency financing, local housing authority land financing, and other housing programs.

IV. GOALS AND POLICIES

The fundamental purpose of a Housing Element is to create a framework or guide for the specific actions that the City will assume in the development and maintenance of the city's housing stock. To develop the framework, the City of Signal Hill has established the following goals and policies.

Goal 1.

To provide an adequate supply of housing to meet the City's need, ensuring a reasonable balance of rental and ownership units, a variety of housing types, prices and densities.

Policy 1.1

Promote construction of new dwelling units as necessary to accommodate the City's projected households in accordance with adopted Land Use Policy. The City should strive for the construction of 419 dwelling units by 1994.

Policy 1.2

Encourage new housing construction for home ownership in a mixture of price ranges, and in a manner that provides for better integration of various socio-economic groups. Specifically, 20 percent of the annual 5-year housing goal should be for very low income and 22 percent for low income groups (see Appendix D).

Policy 1.3

Achieve a housing market that recognizes housing as shelter, and not as a speculative investment, so as to deter rapid turnover and deterioration of housing stock which results from speculation. The demand for housing in the city shall be met in a timely manner through public programs or private incentives in order to balance housing supply and needs.

Policy 1.4

Utilize design and siting criteria in evaluating projects to ensure compatibility with surrounding developments, while taking into consideration ways to minimize housing cost increases.

Goal 2

To encourage the provision of affordable housing for all income groups.

Policy 2.1

Encourage developers to employ innovative and alternative constuction methods, including factory-built and off-site built housing to reduce housing costs, conserve energy, and increase the supply of affordable housing. However, this shall not be construed to allow development which compromises City standards of high quality design and construction.

Policy 2.2

Encourage the inclusion of lower-priced units and "special need" units as part of privately sponsored housing developments, discouraging large concentrations of such units whenever possible.

Policy 2.3

Assist private developers in identifying and preparing land suitable for affordable housing.

Policy 2.4

Develop incentives to encourage non-profit organizations or other for-profit private sector interests to use available federal and state programs to increase the supply of new or rehabilitated affordable housing.

Policy 2.5

Streamline administrative procedures for granting approvals and permits and establish time limits for such approvals to minimize time, costs, and uncertainty associated with development.

Policy 2.6

Strive to assist 145 households per year and 722 total households needing housing assistance, or having special housing needs, by 1994, including assistance with down payments, rental security deposits, or housing vouchers for the homeless.

Policy 2.7

In an effort to accommodate the City's diverse needs, the City shall, whenever feasible, pursue housing assistance and rehabilitation programs aimed toward low and moderate income households and those households with special housing needs.

Policy 2.8

Assume a more active role in reviewing and recommending federal, state, regional, and county-wide housing programs to ensure compatibility with local policies and needs.

Goal 3

To preserve, maintain, rehabilitate and/or replace existing housing in neighborhoods which are safe, healthful, and attractive, in accordance with the adopted Land Use Policy.

Policy 3.1

Encourage residential developments which are secure, safe, and environmentally sensitive.

Policy 3.2

Improve the residential character of the City with emphasis on revitalizing neighborhoods showing signs of blight and deterioration; promote conservation of the City's sound housing stock, rehabilitation of deteriorated units where they may exist City-wide, and elimination of dilapidated units which endanger the health, safety, and well being of their occupants. By 1994, strive for the conservation and rehabilitation of 50 units (10 units per year), and the replacement of dilapidated units which may be demolished, as well as units that will become dilapidated by 1994.

Policy 3.3

Strive to provide an adequate level of services and facilities in existing residential neighborhoods; provide public improvements which enhance or create a feeling of stability and permanence in the City's neighborhoods.

Policy 3.4

Support the formation of community and neighborhood organizations to encourage self monitoring and development of community identity and quality neighborhoods.

Policy 3.5

Preserve architecturally and/or historically significant structures, where feasible.

Policy 3.6

Promote the upgrading of condominium conversion projects to current development standards; promote the provision of adequate parking and compliance with the General Plan and all Municipal Code requirements for public health and safety.

Policy 3.7

Promote the elimination of conditions which are detrimental to the health, safety, and public welfare.

Goal 4

To assure equal housing choices and opportunities for all existing and future households, regardless of race, religion, ethnicity, sex, marital status, or household composition.

Policy 4.1

Implement all reasonable and fiscally prudent means to provide opportunities for all segments of the City's population (with emphasis on very low, low, and moderate income and special need households) to obtain a suitable living environment within all areas of Signal Hill.

Policy 4.2

Support public and private efforts to eliminate all forms of discrimination in housing.

Policy 4.3

Reduce the isolation of income and ethnic/racial groupings in the City through promotion of citizen interaction and encourage the provision of expanded economic opportunities.

Policy 4.4

Minimize displacement of lower income and special needs households, such as the elderly and handicapped, whenever possible and, where necessary, ensure that all requirements for relocation assistance are met.

Goal 5

To ensure the provision of resource and energy-efficient housing.

Policy 5.1

Ensure that new development and rehabilitation efforts, whenever possible, maximize energy efficiency by the use of renewable resources and conservation.

Policy 5.2

Review all new residential subdivisions for solar orientation and energy conserving design.

Goal 6

Reduce the instance of homelessness and provide emergency shelter for the homeless.

Policy 6.1

Cooperate in regional efforts to develop emergency food and housing services for the full range of homeless citizens - families, individuals, the elderly, the mentally ill, etc.

Policy 6.2

Institute emergency assistance programs in Signal Hill, possibly using federal CDBG funds or redevelopment set aside funds.

Policy 6.3

Provide information and referral services for persons and families in need of short or long-term assistance in locating and holding on to housing.

V. IMPLEMENTATON - STRATEGY AND PROGRAM

A. Introduction

This section outlines a coordinated set of actions and processes to carry out the goals and policy objectives of the Housing Element. Existing programmatic and funding sources implementing the Element are identified or evaluated and specific action programs recommended. Recognizing that this is the update of an adopted Housing Element, accomplishments are reported for each program and summarized on Table 20.

B. Identification of Existing Programs and Funding Sources

There is a wide range of programs a city may employ to meet its housing needs. The following discussion identifies a number of programs which have potential for implementing the Housing Element.

1. Local Programs

Traditionally, the authority to regulate various activities such as land use, through zoning and subdivision codes, has been looked upon as a principal plan implementation tool. Some of the more traditional regulatory devices used by Signal Hill include: building and health standards, zoning codes, and subdivision ordinances. While these regulations protect the public health and safety and ensure environmental quality and development in accordance with the City's General Plan, efforts directed toward streamlining and re-evaluating nonfunctional standards can promote affordable housing opportunities.

The City currently uses code enforcement to prevent or correct conditions of neighborhood blight and to encourage upgrading of the City's housing stock.

Many jurisdictions have recently expanded their regulatory role to increase housing opportunities through adoption of property maintenance ordinances, mandatory inclusionary ordinances[1], and ordinances which provide for density bonuses, "granny"

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[1] An example would be requiring a developer to include a minimum number of units for sale or rent at affordable cost (below market rate) within a project.

flats, and planned unit or clustered developments. Recent amendments to the Signal Hill Zoning ordinance permit mobile homes on permanent foundations in the City's lower density residential zones (consistent with California Government Code Section 65852.3). Other regulatory programs affecting housing that have been implemented by other local jurisdictions include speculation controls, enforcement of anti-redlining practices and rent stabilization controls.

The California Environemental Quality Act of 1970, as amended and patterned after the National Environmental Policy Act, requires the City to conduct an environmental evaluation of all projects in the City requiring discretionary approval. The process can be both time-consuming and costly for minor projects within an urbanized area.

Localities also have the authority to acquire and dispose of land. The manner in which these areas are to be used is a potentially significant tool for implementing the Housing Element. Land-banking and land write-downs are the most frequent techniques used in this regards.

Redevelopment tools in Signal Hill have proven extremely successful in providing public improvements. Tax increment gathered through redevelopment can also be used for rehabilitation and to acquire and develop housing. The State of California authorizes local jurisdictions to issue tax-exempt revenue bonds to provide long-term, low interest residential rehabilitation, construction and mortgage loans. However, the tax reform act severely limited the use of bond issues for housing projects unless they are owned by public agencies or private, non-profit agencies. In place of tax exempt bonds, Congress instituted a program of tax credits for private developers of affordable housing.

The City's Housing Rehabilitation Program administered by the Community Development Department with Federal Community Development Block Grant (CDBG) funds encourages neighborhood preservation and rehabilitation. The program provides deferred loans and grants to low and moderate income residents for home improvements to single family dwellings and rental units. Since the program's inception, over 40 households in the City have been assisted. Future participation in CHFA Homeownership and Home Improvement Programs, State HCD Deferred Loan Programs, and other state and federally funded programs could provide an expanded

range of financial resources. However, the continued availability of federally supported programs is highly questionable. If these resources are not available, the City's ability to implement its Housing Programs will be severely impaired.

As part of the City's yearly CDBG application, a Housing Assistance Plan (HAP) is prepared which identifies annual and three-year goals to meet the housing assistance needs of lower income persons. These goals serve as input to SCAG's Area-Wide Housing Opportunity Plan (AHOP), and also serve as a guide for future regional, state, and federal funding allocations (e.g., Section 8, rental assistance).

2. Regional and County Housing Programs

SCAG serves as a regional planning agency for a six-county area of Southern California, including Los Angeles County. In cooperation with local governments, SCAG facilitates the exchange of technical data, in particular, it has identified multi-jurisdiction housing needs in the SCAG Regional Housing Element and in revisions to the Regional Housing Needs Assessment. Special CDBG funding grants are also awarded by SCAG for a variety of innovative local housing programs.

The City receives CDBG funding disbursements from the County of Los Angeles Department of Community Development and also utilizes the Los Angeles County Housing Authority to administer its existing Section 8 program.

3. State Programs

The State is active in housing programs. One of the earlier programs administered by the State is the Cal-Vet Program which is similar to the Federal Veterans Loan program and provides mortgage insurance for armed service veterans from California.

The California Housing Finance Agency (CHFA) provides financing for the development and rehabilitation of low and moderate income housing through direct assistance for mortgage and rehabilitation financing. Direct loans to profit-motivated developers may cover up to 95 percent of a project's cost, whereas 100 percent financing is available to non-profit organizations, including public agencies. Construction and rehabilitation loans are available for multiple-family developments,

mixed income projects and projects for the elderly. A minimum of 30 percent of the units in multiple-family projects must be provided to residents with incomes not exceeding 80 percent of the market area's median income, and each project must contain a mixture of market rate and Section 8 subsidized units. State legislation is on the Governor's desk which would create a California Home Mortgage Corporation (Callie-Mae) to function as a secondary mortgage market institution.

Health and Safety Code Section 37910 and 33750 (The Marks-Foran Residential Rehabilitation Act and The California Construction Loans Act) enables cities and local redevelopment agencies to issue tax-exempt revenue bonds to provide long-term low-interest loans to finance residential construction in redevelopment areas.

The State of California has a number of departments and agencies which provide services and technical assistance in helping communities meet various indirect housing needs and opportunities. These agencies include the Department of Economic and Business Development, the Employment Development Department, the Department of Aging and the Californa Fair Employment Practices Commission (charged with enforcing laws relating to discrimination in housing sales and rental practices). The Department of Housing and Community Development is the principal department responsible for coordinating federal and state housing and community development. Besides providing technical services to local government, private and non-profit groups, the Department administers a variety of state-funded housing programs: The California Low Income Home Management Training Program, an Urban Redevelopment Loan Fund, a Housing Rehabilitation Loan Fund,[1] the Home Ownership and Home Improvement Program (HO-HIP), the Low-Income Home Management Program, and the Advisory Service Fund.

4. Federal Government Programs

While a continued level of federal funding is unpredictable, there are a number of federal programs that deal with housing needs which are beyond local capabilities. The United States Department of Housing and Urban Development (HUD) administers a variety of programs aimed at helping communities provide decent housing for low

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1 Deferred payment loans are provided to local governments to assist with the rehabilitation of housing for low and moderate income households.

and moderate income residents. The assistance may come in the form of income support programs or through subsidies to various levels of the housing process. Although many programs have been devised to aid those of median income, the majority of programs are directed toward meeting the housing needs of the elderly, the handicapped, and those with incomes below the median income. There are several HUD programs which are applicable to Signal Hill:

- Community Development Block Grants -- a revenue sharing program (described above) administered by Los Angeles County for small cities.
- Section 8 Rent Assistance -- housing vouchers providing direct assistance to low income households to help them afford decent housing.

5. Private Nonprofit Corporations

Private nonprofit corporations or limited dividend corporations can be an effective vehicle for activities aimed at rehabilitating existing units and ensuring an adequate supply of affordable dwelling units.

Nonprofit corporations can be organized to do one particular activity, such as sponsor lower-income housing construction, or formed to operate a variety of programs. For example, non-profit corporations often have the acquisition and rehabilitation of substandard or abandoned housing as their sole function. Additionally, some groups offer counseling assistance in credit negotiations and mortgage financing.

Legally, any group of individuals, called "incorporators", can organize a non-profit corporation. In the field of lower-income housing, there are three separate sources of organization that are most common:

a. Developer-Builder

In this case, a non-profit corportion limits its activity to sponsoring lower-income housing. The corporation will not be set up to earn a profit for the developer, although it can pay salaries and consultant fees.

b. Governmental Agencies

Community Development Departments, Housing Authorities, and even municipal governments can be the organizing force behind a non-profit corporation.

c. Spinoffs From Non-Profit Businessmen's Organizations

Often these groups are seeking to generally stimulate revitalization of their city, but do not wish to become directly involved in housing problems. Instead, they establish a separate nonprofit corporation to work on housing problems, or implement specific projects.

Nonprofit corporations can solicit funds from a variety of sources. Money is generally authorized for general purposes, as seed money, administration, and overhead or specific program operation. Sources include:

- Donations from individuals or private institutions, such as foundations or church groups. Private, for-profit corporations often donate money to nonprofit groups.
- Community Development Block Grant funds can be used to fund a nonprofit corporation in whole or in part for housing activities. Neighborhood based non-profit corporations in CDBG target neighborhoods can use CDBG funds for otherwise ineligible activities, including new housing construction if there is specific authorization from HUD for an activity appropriate for community economic development or neighborhood revitalization. Private, nonprofit entities that are not neighborhood based can receive CDBG money but only for otherwise eligible activities.
- Loans or grants from Housing Finance Agencies.
- Fees for services.
- Membership dues. Some corporations are membership organizations and can request voluntary or mandatory contributions in the form of dues.

C. Action Programs

The following actions set forth realistic procedural and program options which would allow for the achievement of identified housing goals, policies, and objectives. Implementation of any individual new program will be subject to further citizen input, funding availability, and the discretion of City legislators. The housing

programs and the corresponding policies that each one addresses are presented in Table 19.

TABLE 19

ACTION PROGRAMS

	Implementation Program	Corresponding Policy
1.	The City prepared a ranking of vacant and deteriorated property in the City, according to consistency with specific site criteria for low and moderate income units or special need units contained in Appendix A.	1.1, 1.2, 2.2, 2.3
2.	The City will continue to review the appropriateness of issuing bonds for low-interest rehabilitation loans and/or low-interest residential mortgage loans by itself or in conjunction with another public agency. Changes in federal tax law have complicated this program, but the City will continue to pursue it.	1.1, 2.2, 2.6, 2.7, 3.2, 4.1
3.	The City will continue the density bonus and incentive program whereby developers are provided a density bonus or a combination of incentives of equal value for making affordable 25 percent of the total number of units in a project for low and moderate income households. While no affordable units have been previously available through this program, the objective for the next 5 years is to add 10 affordable units in this way.	1.2, 2.2, 2.6
4.	The City will reduce impacts on the rental market by continuing enforcement of the channelization or ordinance which restricts condominium conversions to the number of rental units constructed in the previous year unless provisions are made guaranteeing housing opportunities for low and moderate income residents. No condominium conversions have been completed since implementation of this program.	1.3, 2.2, 3.6, 4.3
5.	City staff has revised the City's Zoning and Building Ordinance to: a. Eliminate unnecessary or outmoded restrictions. b. Provide improved development standards which ensure quality development.	1.2, 1.5,2.2, 4.1

Corresponding Implementation Program		Policy
	c. Encourage development on existing nonconforming lots.	
	d. Encourage planned unit or clustered development, more efficient land utilization, more open space, and lower infrastructure costs.	
	e. Encourage mixed use development to create a greater physical and functional integration of jobs and housing.	
6.	Consistent with state law, the City will periodically evaluate the criteria and regulationsallowing the creation or construction of a second unit or "granny flat" above a single story unit or the addition of a bathroom and kitchen for one or two person, elderly, or handicapped occupancies only.	1.1, 1.2, 2.2, 2.8, 4.1
7.	The City will adhere to existing guidelines that consolidate administrative procedures for granting development permits; encourage piggybacking or concurrent filing of multiple development applications; and provide prompt and accurate information to contractors, architects, and property owners. A mechanism will be established to ensure fast tracking of all projects which expand housing affordability opportunities.	1.2, 2.2., 2.5 2.8, 4.1
8.	Continue under a contract with the County of Los Angeles to provide and administer Section 8 rental assistance or housing vouchers for new and existing units in the City. These programs pay the difference between up to 30 percent of the eligible household's income and the market rent of a unit. In 1987, 28 households participated in the Program. This is only 4 more than in 1984 because of federal funding reductions. If federal funding continues, it is desirable for 20 additional households to be assisted through 1994.	2.2, 2.4, 2.7 2.8, 4.1
9.	The City will examine and implement, if feasible a land banking program to assist developers through the issue of low interest loans or land write-downs for the provision of affordable housing.	1.2, 2.2, 2.3 2.4, 4.1

	Implementation Program	Corresponding Policy
10.	The City will continue its on-going program of assisting developers in site selection and utilization of existing federal, state, and regional programs to construct or rehabilitate "special need" housing and below market rate dwelling units.	1.2, 2.2, 2.3 2.4, 3.7, 4.1
11.	The City will continue to review General Plan element policies in light of changing trends, especially those affecting housing, at a minimum of once every five years and recommend amendments as needed.	2.9, 2.1, 3.2 3.3, 4.1
12.	The City will continue to inform residents of provisions in the City's Zoning Ordinance which permit mobile homes on permanent foundations in the City's R-1 and R-2 Zones which we readopted in 1982. No mobile homes have been constructed in the City since initiation of new code provisions.	2.1
13.	The City shall use the site criteria for lower income housing attached as Appendix A.	2.2, 2.3
14.	The City will continue to explore obtaining funding commitments from: The Dept. of Housing and Community Development, under its Deferred Payment Rehabilitation Loan Fund to assist lower to moderate income households in improving their owner occupied dwelling units and to assist rental households by providing financing for rental housing rehabilitation (rent limitation agreements would be necessary on rental property; and CHFA for its Home Ownership and Home Improvement Loan Program, which targets moderate income households.	1.3, 2.8
15.	The City's Department of Community Services will investigate the feasibility of sponsoring the "Adopt-a-family" or Adopt-a-home" program to direct private resources to address the problem of homelessness.	2.6, 2.7, 3.2, 3.4, 4.1 6.1, 6.2, 6.3
16.	The City will encourage joint venture, private and non-profit, cooperative programs for the provision of affordable newly constructed and/or rehabilitated units. Under the new tax law such ventures are offered tax credits for the construction of affordable housing.	1.1, 1.2, 2.2 2.4, 2.6, 2.7 3.1, 3.4, 3.7

	Implementation Program	Corresponding Policy
17.	The City's Public Works Department will continue to study the feasibility of the City assuming from the County the responsibility for checking final subdivision maps in an effort to expedite what is now a very time-consuming and costly procedure.	2.5
18.	The Community Development Department will avoid repeating the environmental review of projects in the same vicinity, and will investigate the possible preparation of a Master Environmental Assessment for the City, to reduce time and costs involved in preparing individual reviews for all projects.	2.5
19.	The City will encourage the local community college and adult education centers to develop information and counseling programs that advise and assist homeowners and renters in money management housing selection, purchase procedures, and property care and maintenance.	1.4, 2.7, 3.1 3.4, 3.7
20.	The City shall continue to seek Community Development Block Grant (CDBG) funds as available.	2.8
21.	The Department of Planning & Community Development, utilizing CDBG funds and working with all City departments, will continue to enforce the City's Building and Safety, Health, Fire, Housing, and Zoning Codes, on a communitywide basis, and provide counselling sources for rehabilitation. During 1988, the City responded to over 70 code complaints and obtained compliance in 95 percent of the cases.	3.2, 3.4, 3.6
22.	The Department of Planning & Community Development, utilizing CDBG and other funds (as available), will continue to administer and provide deferred rehabilitation loans and grants for eligible single family and rental property improvements. Thirty-four single family and 15 rental units have been upgraded with the Program since 1982. Additional participation by 50 households is desired by 1994.	1.3, 2.7, 2.8 3.2, 3.4 4.1
23.	The Department of Planning and Community Development, utilizing CDBG funds, as available, will annually review its Housing Rehabilitation Programs to ensure the most productive method of utilizing CDBG funds.	2.8

	Implementation Program	Corresponding Policy
24.	The Department of Planning and Community Development will continue to utilize rental limitation agreements when rehabilitation funding is provided for rental property in Signal Hill. Limitations have been placed on 11 dwelling units over the last 2 years.	1.3
25.	The City will encourage community groups to to organize and implement Neighborhood Clean-up and Identity programs. The programs will assist residents in organizing clean-up campaigns and other activities to build pride and responsibility in their neighborhoods.	3.4, 3.5, 317
26.	The City will continue utilizing Section 17299 of the Revenue and Taxation Code which denies income tax deductions to owners of substandard property upon notification by the City.	3.1, 3.2, 3.7
27.	To advance equal housing opportunities, and to ensure city-wide compliance with all fair housing laws and regulations, the City will continue to investigate complaints; provide referral information to minority home seekers; and promote affirmative action among local real estate boards workers, property owners, and banking and lending institutions within the City.	3.4, 4.1, 4.2, 4.4, 6.3
28.	The Department of Planning and Community Development will require all participants in the City's Residential Housing Programs to utilize the most cost-effective and energy-conserving construction and rehabilitation techniques available (i.e., home insulation, solar energy, building orientation, etc.)	5.1, 5.2
29.	The City shall take measures, as feasible, to facilitate and maximize energy conservation in new and existing residential developments, including information distribution to residents; energy audits, as requested by residents and provided by the Southern California Edison Company; retrofitting of existing units with energy conservation devices; and requiring energy saving devices in new construction.	5.1
30.	The City of Signal Hill will continue to monitor private investment and fair lending practices in the City to identify mortgage or rehabilitation loan deficient areas and will bank funds with financial institutions which affirmatively support these areas, through the Long Beach Fair Housing Foundation.	3,4, 4.1, 4.2

	Implementation Program	Corresponding Policy
31.	City Departments will continue to coordinate capital improvement plans, placing priority on the special needs of areas designated for revitalization. Where feasible, CDBG funds shall be used to finance infrastructure improvements. Since 1984, the City has expended in excess of $378,250 in CDBG funds on Capital Improvements in areas designated for revitalization.	3.1, 3.3, 3.7
32.	The City will encourage the use of existing funds and on an on-going basis, support additional state and federal legislation which continues or results in additional levels of funding for local housing activities, (i.e., FHA and HUD sponsored mortgage insurance and financing programs).	2.7, 2.8, 2.9
33.	The City will periodically review its user charges and fees for services and utilities to ensure that they are consistent with costs incurred by the City.	3.3
34.	The City will utilize the data base provided by a recent survey of historical resources and structures in the City as a basis for prioritizing those resources that should be preserved and for developing appropriate protection mechanisms.	3.4, 3.5
35.	The City will cooperate and coordinate its housing programs with the City of Long Beach and Los Angeles County; alternative inter-governmental arrangements and program options will be investigated. This will allow shared and/or complimentary programs for the time and cost savings.	2.9, 3.4
36.	The City will support adoption of federal and state tax incentives which encourage investors to improve their properties and disincentives for investors who maintain their properties in substandard conditions.	1.4
37.	The Housing Element will be reviewed annually. The annual review will be based on the following criteria: a. The appropriateness of the housing goals, objectives, and policies in contributing to the attainment of the state housing goal. b. The effectiveness of the Housing Element in attainment of the community's housing goals and objectives.	4.1

	Implementation Program	Corresponding Policy
	c. The progress of the City in implementation of the Housing Element.	
38.	The entire Housing Element will be revised in 1994 as required by State law.	4.1
39.	The city will continue to use Proposition A funds for Dial-A-Ride for seniors and handicapped residents. (Operation is contracted with Long Beach Transit.)	3.3, 4.1, 4.3
40.	The Signal Hill Redevelopment Agency is currently studying programs for the 20 percent set aside to be used for low and moderate housing. Alternatives will be considered in 1990-91.	1,2, 2.4, 2.6, 2.7, 4.1

An evaluation of the city's housing programs is made according to each program's implementation, the housing goal(s) it accomplishes, and the program status to date. Table 20 summarizes their accomplishments.

Of the 40 housing programs, 36 are currently being implemented and have been implemented for the past 4 years. The four programs that have not been implemented include land-banking, Adopt-a-Family, tax credits for affordable housng, and red-lining.

Land-banking has not been started due to the limited availability of vacant, developable land in the city. The focus on economic development and the lack of funds has also postponed the implementation of the program. The feasibility of the Adopt-a-Family program has not been studied, but the crisis intervention/human services program coordinator will pursue this program soon. Tax credits for affordable housing has not been possible due to retrictive regulations. Red-lining practices have not been observed as the city's housing market is not characterized with very wide disparities in housing prices. The Long Beach Fair Housing Foundation continues to monitor redlining practices.

TABLE 20

EVALUATION OF HOUSING PROGRAMS
1984-88

Program	Is Program Active/ Implemented?	Goal	Comments/Status
1. Evaluate RH Property	Yes	1,2	Inventory of RH Zone Complete.
2. Tax-exempt Bonds	Yes	1,2,3,4	Program available through Los Angeles County.
3. Density Bonus	Yes	1,2	City has never used this program, because density numbers are unrealistic but it is available should a developer apply.
4. Condo Conversions	Yes	1,2,4	Conversions in the City are not very popular and none are expected in the future.
5. Zoning Revisions	Yes	1,2,4	City developed new design standards and is using most recent building codes (1987).
6. Granny Flats	Yes	1,2,4	City is waiting for an application per state law; the City shall then adopt the Granny Flat Ordinance within 90 days.
7. Streamline	Yes	1,2,4	City is very cooperative with citizens, builders, and will strive for further improvements.
8. Section 8	Yes	2,4,6	28 households in program (increase of 4 from 1984) however, goal for an additional 20 from 1989 to 1994 is unrealistic.
9. Land-Banking	No	1,2,4	Focus has been on economic development, nothing undertaken to date. Implementation expected 1992-1994.
10. Special Needs	Yes	1,2,4	City provides information and literature to citizens, builders, etc., about requirements in UBC.
11. General Plan	Yes	2,3,4	City staff is frequently sent to workshops and seminars on current issues. The general plan has been updated on a regular basis to comply with state law.

TABLE 20 (continued)

Program	Is Program Active/ Implemented?	Goal	Comments/Status
12. Mobile Homes	Yes	2	No mobile homes have been constructed since adoption of zoning code.
13. Site criteria for Low/Moderate Housing	Yes	2	No current activity or low income proposals. However, city will encourage when approached.
14. Rehabilitation	Yes	1,2	Ongoing CDBG Prgram. No other federal funds currently available.
15. "Adopt A Family"	No	2,3,4,6	No action on this program to date. Implementation expected 1989-90.
16. Tax Credits for affordable housing	No	1,2,3	No opportunities to date, program regulations too restrictive. City ready to implement when developer interested.
17. Subdivision Processing	Yes	2	City determined that it is more feasible for Los Angeles County to assume this responsibility.
18. Environmental Review	Yes	2	City requires environmental review. When required, available/ applicable info is used.
19. Home-Ownership Education	Yes	1,2,3	Workshops and classes offered to citizens re: Tax preparation, money management, etc.
20. CDBG	Yes	2	City is actively pursuing this program.
21. Code Enforcement	Yes	3	Actively pursuing alternative means: infraction vs. current misdemeanor.
22. Rehab	Yes	1,2,3,4	Forty-one units rehabilitated since 1982.
23. Annual Review	Yes	2	Currently reviewing methods.
24. Rental Rehabilitation	Yes	1	Fifteen units rehabilitated since 1982.

TABLE 20 (continued)

Program	Is Program Active/ Implemented?	Goal	Comments/Status
25. Clean-up	Yes	3	City Chamber of Commerce initiated beautification programs.
26. Tax Code Sec 17299	Yes	3	Housing code violators receive notice of possible tax consequences.
27. Fair Housing Foundation	Yes	4	City's contribution increased from 1985. A total of 104 complaints resolved/received in 1986-87 (99 in 1985).
28. Energy Conservation	Yes	5	Staff inspects rehabs per state energy guidelines and informs at plan check phase of project review.
29. Energy Education	Yes	5	City follows Title 24 and provides Edison Co. information on energy to public.
30. Red-Lining	No	4	City does not see this as a problem in the current real estate market. Fair housing staff will continue to monitor.
31. Capital Improvements	Yes	3	Since 1983, over $415,000 have been expended on capital improvement projects.
32. Federal Mortgage	Yes	2	Possible future funding.
33. Fees for Utilities	Yes	3	City is assuming water utility costs--at a loss.
34. Historic Resources	Yes	3	Historic Committee has been appointed and appropriate steps are being taken to proceed.
35. Inter-governmental Cooperation	Yes	2	City supports LA County rehabilitation programs. City needs more info from Long Beach.
36. Absentee Owners	Yes	1	Monitoring of legislation has been extent of activity.
37. Annual Review	Yes	4	This update incorporates review.

TABLE 20 (continued)

Program	Is Program Active/ Implemented?	Goal	Comments/Status
38. Housing Element Update	Yes	4	City is ahead of schedule on the 1989 update and will comply with the 1994 update.
39. Dial-A-Ride	Yes	3,4	Twenty buses service the Long Beach, Signal Hill, and Lakewood area.
40. Redevelopment Set Aside	Yes	1,2,4	Planning for use of funds 1990-91. Implementation expected 1996.

Appendices

APPENDIX A

SITE CRITERIA FOR LOWER-INCOME HOUSING

1. Compatibility with General Plan.

2. Absence of detrimental conditions.

3. Outside an area of traditional lower-income concentration.

4. The project will not cause a predominance of lower-income residents in an area.

5. To encourage the dispersion of lower-income housing, it should be dispersed, wherever possible, and intergrated with market rate housing.

6. Essential community facilities and services should be reasonably accessible.

7. The following criteria should apply specifically to elderly housing:

   a. Relatively flat site to ensure mobility.

   b. Integration into total neighborhood to facilitate contact with people of all age groups.

   c. Within reasonable walking distance to commercial, human care, and recreational facilities and churches.

   d. Absence of nuisance factors such as noise.

   e. Good lighting and safe street crossings on and around project.

   f. The use of indoor and outdoor safety fixtures.

   g. The availability of special supportive services such as meal delivery, shopping assistance, and emergency and long-term medical care.

   h. Continued free "dial-a-ride" service for seniors.

APPENDIX B

HOUSING ELEMENT QUESTIONNAIRE RESULTS

Introduction

This report summarizes the results of a community-wide survey conducted as part of the City's program to revise the Housing Element of the General Plan. An updated Housing Element is required by State law and must contain goals, policies, and programs for the provision of housing for all persons, regardless of circumstances, and the development of a balanced residential environment with access to employment opportuntities, community facilities, and adequate services. The Housing Element Questionnaire was an effort to involve the public in the process. Responses to the questionnaire will help staff, Planning Commissioners, and City Councilmen define major issues and needs and develop implementation programs.

Success of the Questionnaire

According to survey research experts, a maximum response rate of one percent to three percent is typical for a mail-back questionnaire. Remarkably, the response rate to the Housing Element Questionnaire was 22 percent. Of 2,806 questionnaires delivered, 620 were returned, suggesting that Signal Hill residents are generally interested in City affairs. Citizens expressed appreciation at the opportunity to provide input via the questionnaire and many expressed an interest in the results of the questionnaire.

The data from the survey produced some exciting results and interesting conclusions. Highlights of the survey results follow. A copy of the questionnaire with specific responses is included as Appendix A and B.

Survey Highlights

According to the 1980 U.S. Census, 73 percent of the City's housing stock is renter-occupied, and 27 percent is owner-occupied. However, only 50 percent of survey respondents were renters with 50 percent of respondents indicating that they owned their own homes. It is no surprise that homeowners are more likely than renters to show an interest in City affairs.

Most survey respondents (61 percent) indicate that they are at least somewhat satisfied with Signal Hill as a place to live. Thrity-nine percent (39 percent) are very satisfied, and 10 percent are dissatisfied.

When asked what things they dislike about Signal Hill, respondents indicated a dislike for run-down areas of the City (26 percent) crime (18 percent), and a lack of adequate commercial areas (16 percent). A related question revealed that 86 percent of respondents would favor the development of a commercial neighborhood shopping center in proximity to Willow Street and Cherry Avenue. Respondents also indicated some disdain at the cost of housing in the City (14 percent) and inadequate recreational and cultural opportunities (11 percent). Respondents were also given an opportunity to comment on "other" things they did not like about Signal Hill. Comments were consolidated into the following generalized categories:

	Number of Comments	% of Total Survey Respondents
Police Publicity	47	7.6
Quality & Amount of Condominium Development	38	6.1
Inadequate Street Repair	37	6.0
Lack of Shopping Facilities	30	4.8
Disharmony on City Council	25	4.0
Poor Code Enforcement	10	1.6
Massage Parlor	8	1.3
Oil Well Nose & Blight	7	1.1
Trash Service	7	1.1
High Rents	4	.6
On-Street Parking Congestion	4	.6
Postal Service	4	.6
Schools 4	.6	
Miscellaneous	21	3.4
TOTAL	258	

The majority of survey respondents (69 percent) would prefer to live in a single family dwelling. Other alternative preferred housing types included: Condominiums (15 percent), garden apartments (10 percent), mobilehomes (4 percent), and high-rise apartments (2 percent).

Ninety percent (90 percent) of those residents responding to the questionnaire felt that the City of Signal Hill should continue to grow in some manner. On the other hand, 10 percent of survey respondents expressed a desire to see the City's population remain the same. Of the 90 percent favoring some form of growth, 5 percent felt that no limit should be placed on growth; more than half (61 percent)

felt that growth should be consistent with the City's ability to provide services; another 24 percent indicated that low to moderate growth would benefit the City.

As part of the questionnaire, residents were provided with a list of possible needs and issue areas and asked to indicate if they were very concerned, somewhat concerned, or not concerned about the issue or need. Residents appeared "very concerned" about: 1) Improving the visual image of the City; 2) Street repairs and resurfacing; and 3) Impacts of increased residential density. Other issue areas that residents were concerned about included: Lack of neighborhood shopping facilities; the ability of the City to maintain current levels of service; preservation of the natural environment; rehabilitation and repair of existing homes; and construction of affordable housing,. Residents had mixed feelings about conflicts between existing oil drilling and new development, the provision of jobs, and improved public transportation.

In light of the large amount of land available for development in Signal Hill, 67 percent of survey respondents favored placing emphasis in the future on a proper balance of residential, industrial and commercial development. Seventeen percent (17 percent) of the respondents favored emphasis on residential development, 3 percent favored emphasis on more industrial development. In a related question, 51 percent of respondents felt that housing should be available for future employees as part of the City's attraction to business and industry.

Residents were also polled to determine what methods they favored for providing "affordable housing". Most respondents felt that affordable housing could be provided by requiring all new development projects to include a certain percentage of "affordable housing units (38 percent); 27 percent also felt that incentives could be offered to developers to build affordable housing. Increasing the land area zoned for multiple family residential development (15 percent) or permitting residential units in conjunction with commercial or industrial development (20 percent) appeared to be less favorable methods of providing affordable housing.

Residents were asked to evaluate a list of programs that would help to maintain and improve the City's residential areas. The most frequently endorsed programs were neighborhood cleanup (17 percent) mandatory removal of abandoned or substandard dwelling units (14 percent), and crime prevention (14 percent). Other potential programs receiving favorable responses, included low-interests loans to property

owners to rehabilitate their homes (13 percent), direct grants or rebates to senior citizens for housing rehabilitation (10 percent), and code enforcement programs (9 percent). In general, citizens strongly support most improvement programs; evidence that City residents are concerned about the City's visual image and want to upgrade those areas in the City that are deteriorated.

As the questionnaire's finale, residents were given an open-ended opportunity to provide further comments and recommendations. 159 residents took this opportunity. The general categories of their comments are consolidated below:

	Number of Comments	Percent of Respondents
Total	159	25.6
Would Like to See Lower Densities or Condominiums	38	6.10
Need for Shopping Center	15	2.40
Disharmony on City Council	14	2.30
Improved Street Repair Program	14	2.30
Improved Street Sweeping Program	12	1.90
Lack of Parks/Need for More Landscaping	10	1.60
Need for City-Wide Cleanup	10	1.60
Oil Well Noise & Blight	7	1.10
High Rents	7	1.10
Stronger Code Enforcement Program	5	0.08
Massage Parlor	4	0.06
Lack of On-Street Parking	3	0.05
Miscellaneous	20	0.30

APPENDIX C

HOUSING CONDITIONS SURVEY

CITY OF SIGNAL HILL
EXTERIOR HOUSING CONDITIONS SURVEY
SEPTEMBER 1979

I. PROPERTY DESCRIPTION

1. Address _____

2. Assessor's Parcel No. _____

3. Unit Type: • Single-Family Detached ____ • Multi-Family ____
• Single-Family Attached (Condo) ____ --2 to 4 ____
--5 or more ____

4. Occupancy

• Vacant ____
--For Sale ____
--For Rent ____
--Unknown ____

• Occupied ____
--No. of Units ____
--For Sale ____
--For Rent ____

II. EXISTENCE OF SUBSTANDARD CONDITIONS (Consult detailed rating system & descriptions)

1. Condition of Major Elements (0-10 score)

• Foundation ____
• Walls ____
• Roof ____

TOTAL SCORE OF MAJOR ELEMENTS ____

2. Condition of Minor Elements (0-4 score)

• Wall Coverings ____
--Lack of Paint ____
--Broken and/or Rotted Siding ____
--Broken Panes or Screens ____

• Driveway/Walkway ____
--Deteriorated Driveway, Walkway ____

• Fencing ____
--Broken or Leaning Fence ____

• Landscaping ____
--Lack of Landscaping ____
--Accumulation of Trash or Weeds ____
--Exterior Storage of Combustible Materials or Equipment ____
--Improper Storage of Major Appliances or Accessories ____

TOTAL SCORE OF MINOR ELEMENTS ____

III. SUITABILITY FOR REHABILITATION

0-6	7-14	15-30	31+
Sound	Minor Repair	Major Repair	Beyond Repair

DETAILED SURVEY CRITERIA

1. LEVEL OF REPAIRS REQUIRED TO CORRECT SUBSTANDARD CONDITIONS

Various ratings will be based on a deficiency scoring system allotting 0 to 10 points for major elements and 0 to 4 points for minor elements, as follows:

Condition	Major Elements	Minor Elements	Definition
Beyond Repair	10	4	Total replacement of element necessary, or total absence of element.
In Need of Major Repair	7-9	3	Requiring expenditures of at least 50% of total replacement cost to restore to sound condition.
In Need of Minor Repair	3-6	1	Requiring expenditures of less than 50% of total replacement cost to restore to sound condition.
Sound Condition	0-2	0	Sound condition, requiring no more than normal maintenance.

2. SUITABILITY FOR REHABILITATION

Each property is then given an overall rating based on the total number of deficiency points, as follows:

31 or more — Beyond reasonable repair, rehabilitation impractical. This classification is used when a structure, either by construction, deterioration or size, does not indicate the economic feasibility of rehabilitation.

15 to 30 — In need of major repairs, rehabilitation questionable. Most of the deficiencies would require a building permit, warrant some expert knowledge of construction, and are expensive. The structure must be constructed sound enough and of sufficient size to economically warrant rehabilitation.

7 to 14	In need of minor repairs, rehabilitation feasible. All items could be corrected by the homeowner at a minor expense and building permits may not be required.
6 or less	Sound, requiring no more than normal maintenance. All items are sound and in good repair. Very minor maintenance items such as paint and hairline cracks may be present.

3. DETAILED DEFINITIONS RELATED TO MAJOR AND MINOR ELEMENTS

- FOUNDATION

Sound (0-2): The foundation is constructed of concrete or masonry and is greater than 6 inches above finished grade.

Needs Minor Repair (3-6): The foundation of wood structures is less than 6 inches, but well above finished grade. Cracks no greater than 1/16-inch wide and, collectively, cover no more than 1/5 the area of the foundation. There should be no wall sagging or buckling attributed to defects of the foundation. Minor holes, crumbling, chipping or general deterioration of the foundation cannot be greater than 1/5 of its area.

Needs Major Repair (7-9): The foundation is constructed of masonry or concrete, but less than 1/2 is on or below finished grade. Crumbled, cracked (1/4-inch or greater in width) chipped or broken concrete is greater than 1/5 but not more than 3/4 of the foundation area. Warped, buckled or sagging walls can be definitely attributed to deterioration of the foundation.

Beyond Repair (10): No foundation is present, or constructed on peers, or from makeshift materials. More than 1/2 of the mudsell is on or below the finished grade. General deterioration of concrete or masonry foundation is greater than 3/4 of its area.

- WALLS

Sound (0-2): All walls plumb and, may have very minor deficiencies (hairline cracks, less than 1/16-inch wide).

Needs Minor Repairs (3/6): All walls plumb—minor holes, from the size of a fist to no more than 2-feet in diameter. Broken, missing, or cracked (1/16-inch wide, thickness of pencil lead) exterior siding from 1 foot to 1/4 of the total wall surfaces. Most deficiencies may be repaired by homeowner at minor expense, and may not require a permit.

Needs Major Repair (7-9): Walls out of plumb, twisted, warped or repaired with makeshift materials. Holes not less than 2 feet in diameter to a total of not more than 1/2 of the exterior surface. Cracks must be greater than 1/16-inch wide and not more than 1/2 of the total wall surface. The entire structure is basically plumb. Most deficiencies will require a building permit, warrant some expert knowledge of construction and are expensive.

Beyond Repair (10): All walls out of plumb, entire structure leaning. Holes, cracks, broken or missing exterior siding greater than half the total surface area. Economics and feasibility of repairs would not produce a sound, safe dwelling. Demolition and reconstruction of a new dwelling would be warranted.

ROOF

Sound (0-2): May have very minor deficiencies (a few warped shingles, etc.).

Needs Minor Repair (3-6): The roof line may sag very slightly, but not over 1/4 of the roof area. The roofing material may need from minor to complete replacement. Holes may be present, but no greater than the size of a fist. Most deficiencies may be repaired by homeowner and may not require a permit.

Needs Major Repair (7-9): Structural weakening caused by termites, and dry rot damage evidenced by rippled eaves and sagging over 1/4 and not greater than 1/2 the roof area. Holes greater than the size of the fist and not over 1/2 the area of the roof. Very often makeshift materials are used to repair deficiencies. The repairs would be expensive; may warrant a building permit, but would yield a sound standard roof.

Beyond Repair (10): General damage to structural member would be greater than 1/2 the roof area. The entire structure would be in such disrepair that it would not be feasible to replace the roof.

OTHER STRUCTURAL ITEMS

Sound (0): All exterior structural items not included in any of the above categories are in good condition (i.e., windows, doorways, chimneys, etc.).

Needs Minor Repair (1): Not more than 1/4 of windows, doorways or attic vents broken or missing, nor more than 1/2 of the total of any single item broken or missing. No more than two broken or missing window panes.

Porches and chimneys structurally sound and not more than 1 square foot of area broken, missing or in disrepair. No more than two risers missing or broken and hand rails present.

All repair could be accomplished by the homeowner with a minimum of expense.

Needs Major Repair (3): Three or more window panes missing or broken. More than 1/4, collectively, or more than 1/2, singly, of the windows, doorways or attic vents missing.

Porches and chimneys leaning or with more than 1 square foot of area broken, missing or in disrepair. More than two risers missing or broken. Handrails in need of repair or missing.

Beyond Repair (4): This applies when the deterioration of all minor elements make it economically unfeasible to make repairs.

DRIVEWAYS/WALKWAYS

Sound (0): Driveways and walkways are in good repair or the traffic problems and general landscaping are designed so as to make walkways unnecessary.

Needs Minor Repair (1): Cracked, broken, uprooted or chipped concrete or pavement will be evidenced, but cannot, collectively, be more than 1/8 of the total surface area.

No significant portion of the driveway nor any portion of walkways is missing.

Needs Major Repair (3): Cracked, chipped, broken or uprooted surface material must be, collectively, more than 1/8 but not more than 3/4 of total surface area. No more than 1/2 of the driveway or walkways is missing.

Beyond Repair (4): This applies to driveways and walkways in such disrepair that replacement of surface materials would not correct the deficiencies. Examples are the removal of several trees or changes in topography.

FENCING

(When fences are shared by two parcels, both parcels should be rated as to the fence's condition.)

Sound (0): All structural elements are in good repair and no painting is necessary. Small picket or decorative fences may have minor deficiencies (retouch painting or one or two elements in need of repair).

Needs Minor Repair (1): All fences are sound and not leaning. Brick, chain link, or block fences may not have over 1/4 of the side broken or missing. Wood or any other inexpensive fencing shall not have more than 1/2 of one side in disrepair.

Needs Major Repair (3): Brick, block or chain link fences must have more than 1/4 of one side and not more than 1/2 of the entire fencing with broken, missing or severely leaning elements.

Wooden or other inexpensive fences must have more than 1/2 of one side and not more than 1/3 of entire fencing with severely leaning, missing or broken elements.

Beyond Repair (4): Brick, block or chain link fences with more than 1/2 of entire fencing with severely leaning, fallen missing or broken elements.

Wooden or other inexpensive fences with over 1/3 of the entire fencing with severely leaning, fallen, missing or broken elements.

LANDSCAPING

Sound (0): The total spectrum of landscaping, including plants, decorative rock or other material, in good repair. Minor deficiencies may be allowed if they can be corrected under normal weekly maintenance.

Needs Minor Repair (1): This group would include bare areas of soil not more than 1/2 of the total lawn area; tall grass, litter, weeds or decorative materials in disrepair.

Needs Major Repair (3): Overgrown vegetation, seriously broken or missing decorative materials and large bare areas of unimproved soil, totaling over 1/2 of the yard area.

A parcel rated within this group would require major redesign, replanting, or renovation beyond that which could be construed as "normal maintenance."

Serious Fire and Safety Hazards (4): This rating is utilized when there is tall, dry grass or weeds, accumulations of lumber, trash, cast-off materials and other combustibles in a quantity large enough to pose a serious fire hazard or rodent harborage.

APPENDIX D

ANNUAL AND 5-YEAR ANNUAL OBJECTIVES

New Construction	Annual	5-Years	Percent
Very Low Income Housing	17	84	20
Low Income Housing	18	92	22
Moderate Income Housing	14	71	17
Higher Income Housing	34	172	41
Totals	83	419	100

Source: SCAG, RHNA.

CIRCULATION AND INFRASTRUCTURE ELEMENT
of the
SIGNAL HILL GENERAL PLAN

City of Signal Hill

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* These circulation and infrastructure maps are located in the Signal Hill Planning Department.

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I. INTRODUCTION

A. Purpose and Scope

The purpose of the Signal Hill Circulation and Infrastructure Element is to provide guidelines and policy direction for: (1) the provision and maintenance of a comprehensive transportation system that provides access to all parcels and land use types; and (2) the establishment and maintenance of such infrastructure as water, sewer, gas, electricity, telephone and petroleum lines.

It is essential for land to be accessible from one or more areas to accommodate the transport of persons, goods and utility services to, from or across the property. Circulation access can be provided by way of roadways, bicycle paths, sidewalks or trails. Utility services can be provided as an integrated part of the transportation system.

Efficiency in the Signal Hill transportation system can be achieved by minimizing the amount of land necessary to serve properties, consistent with sound transportation planning and engineering principles. Efficiency in roadway planning, to the extent that it reduces unnecessary travel, can result in a reduction in automotive emissions and a corresponding increase in air quality. Fewer square miles of paved streets can also result in lower volumes of storm water runoff from roadways, with predictable impacts on storm sewer needs. Most importantly, an efficient transportation system can contribute to the quality of life in Signal Hill through reducing congestion and trouble spots and making it easy to move from place to place.

The Signal Hill Circulation Element recognizes that transportation routes and utility services play an important role in shaping the physical development of the City. Roadways and utilities, along with structural development, are a part of the architecture in Signal Hill and provide a relatively permanent foundation for shaping substantial portions of the city. Signal Hill's Circulation and Infrastructure Element also offers opportunities for a variety of transportation means, such as driving, biking and walking. Lastly, Signal Hill has distinguished view potentials from the Hill that are accessed by way of roadways and sidewalks.

Circulation maintains vitality in Signal Hill, operating as the system for movement of all residents, commodities and, to a certain extent, information. The infrastructure network provides the essential energy resources, services and information linkages to support Signal Hill residents and visitors.

B. Legislative Authorization

The State of California recognizes that a Circulation Element provides policy direction for the location and extent of transportation routes and utility systems throughout a city. Signal Hill's Circulation and Infrastructure Element also provides policy guidelines for efficient transportation linkages that offer potential for multi-modal use and for the reduction, to the extent feasible, of adverse environmental consequences. Government Code Section 65302(b) requires:

> "A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element of the plan."

Furthermore, the state guidelines recommend that a Circulation Element should address coordinated land use and circulation relationships, circulation efficiency and safety, protection of environmental quality and equitable use of economic and natural resources.

The Signal Hill Circulation and Infrastructure Element addresses, to the extent possible, streets and highways, parking facilities, transit and rapid transit, railroads, paratransit, bicycle and pedestrian facilities. In addition, the element addresses utility infrastructure in Signal Hill including petroleum pipelines, natural gas pipelines, electrical transmission lines, cable television systems, sewer and sanitary waste systems, solid waste collection, water distribution, flood and drainage control. Although a separate Infrastructure Element is not required for general plans under state law, inclusion of infrastructure policies in the general plan is required.

The Circulation Element is a logical counterpart to infrastructure, since many petroleum, communication and electrical lines and water, sewer and drainage systems are constructed in conjunction with roadway and sidewalk paving. Policies in the Signal Hill Circulation and Infrastructure Element relate to circulation, as

well as to petroleum development and provision of natural gas, electricity, communications, sewer and sanitary waste, water distribution and flood and drainage control.

C. Relationship to Other General Plan Elements

The Signal Hill Circulation and Infrastructure Element is closely related to other elements of the General Plan, such as the Land Use Element. The Circulation and Infrastructure Element must, at least, guide the support mechanisms for the development of land as specified in the Land Use Element and, conversely, may dictate land use policies. For example, where the Land Use Element designates an area for high density residential uses, the Circulation and Infrastructure Element must guide the roadway, water, sewer, drainage and utility systems to accommodate the residents anticipated in that area. Circulation routes in Signal Hill must be coordinated with those in Long Beach to achieve efficient traffic and pedestrian flow.

The Circulation and Infrastructure Element is also related to the Environmental Resources Element. Roadways can be directed to areas that offer views or to recreational areas as identified in the Environmental Resources Element or, similarly, away from any identified sensitive habitat areas.

Lastly, the Circulation and Infrastructure Element is related to the Safety Element by way of emergency access routes. The Safety Element identifies a need for evacuation routes under emergency conditions, such as earthquake or toxic waste spills. The Circulation and Infrastructure Element can guide the development of roads to ensure that their width, number of lanes and level of maintenance are adequate to carry and direct emergency traffic.

II. BACKGROUND AND EXISTING CONDITIONS

A. Circulation

1. Regional Network

The City of Signal Hill is served by a network of transportation systems that influence physical, social and economic activities within the City and the adjacent region. These systems include regional thoroughfares and freeways, which are used by automobiles, commercial vehicles and trucks, public transit and private transit (such as vanpools). Users decide which transportation is most suitable to them, based upon their needs, and upon the relative congestion, convenience and extent of the physical facility. Circulation planning in Signal Hill requires a coordinated approach, to link the systems described below, and provide efficient and effective service to the City.

City of Long Beach - Major Generators

Long Beach, which totally surrounds Signal Hill, has well-established traffic patterns. Signal Hill must be attentive to these patterns as they indicate the type and location of traffic that can evolve in Signal Hill.

Long Beach Airport: Long Beach Airport is located one-half mile north of the City of Signal Hill. Los Angeles International Airport is 20 miles northwest of the City and provides domestic and international transportation service for passenger and air freight destinations. As Signal Hill expands its services to accommodate the demand for economic growth and prosperity, the reliance on airport facilities and service will incrementally increase. Both the Long Beach Airport and Los Angeles International Airport Master Plans specifically address the issues of accommodating future growth and projected levels of service. Freeway access will become increasingly more important as development in and around Signal Hill and Long Beach continues. Cherry Avenue and Temple Avenue off-ramps will not sufficiently meet traffic demands unless proper improvements are implemented.

Long Beach Memorial Hospital: Long Beach Memorial Hospital Medical Center, Community Hospital and St. Mary's Hospital Center are the three largest providers

of emergency medical services, including ambulatory care services on a 24-hour basis in the area. Within a year's time, the Long Beach Comprehensive Health Care Center will have an additional role in influencing the flow of emergency vehicle traffic on the Long Beach/Signal Hill roadway system.

Downtown Long Beach: This area has been identified as one of the major commercial centers of Southern California. In an effort to strengthen the local economy, Long Beach has concentrated on intensifying business and industrial development. Examples include a variety of developments in the downtown area, as well as projects such as the proposed World Trade Center. Most major activity is located south of Pacific Coast Highway, adjacent to the Long Beach Harbor or in the vicinity of the Long Beach Municipal Airport. Circulation improvements to these activity centers can potentially stimulate and expand the production of services, thus strengthening the downtown economy. As the Long Beach economy grows, there will be indirect effects on Signal Hill.

Freeways

The San Diego Freeway (I-405) provides major access to Signal Hill. I-405 contains an eight-lane cross section and interchanges approximately 3 to 4 miles to the north of Cherry Avenue with the Long Beach Freeway (I-710). There are approximately 2,000 vehicles per lane per hour and, according to the State Department of Transportation, the San Diego Freeway is approaching its design capacity. Full access is provided at Atlantic Avenue, Cherry Avenue, Orange Avenue and Lakewood Boulevard. Northbound I-405 access to the City for traffic oriented south on Cherry Avenue is provided at Temple Avenue. Lakewood Boulevard, near Willow Street, provides full access to the I-405.

The Cherry Avenue ramps are located outside the Signal Hill City limits, within the City of Long Beach. The northbound ramps for Cherry Avenue are separated for northbound and southbound Cherry Avenue. For those northbound San Diego Freeway motorists desiring to exit at Cherry Avenue and travel east and west on Spring Street or travel southbound on Cherry Avenue, the off-ramp is located at Temple Avenue approximately one-half mile east of Cherry Avenue and south of Spring Street. The northbound ramp is located at Cherry Avenue and permits traffic to turn only north into the City of Long Beach.

Rail: Signal Hill industrial and commercial properties do not have immediate rail access. The Union Pacific and Southern Pacific Railroad lines exist adjacent to the City of Signal Hill. The Union Pacific line is located north of Signal Hill in Long Beach and along the western boundary of the Long Beach Airport. It terminates just south of East Wardlow Road at Cherry Avenue in Long Beach. This line is utilized for freight cargo. The Southern Pacific Railroad right-of-way is located along the southwest boundary of Signal Hill. This railroad line has been recently deactivated, and the tracks have been removed.

Harbor: Long Beach Harbor is located 3 miles southwest of Signal Hill. Transportation linkages to domestic and international destinations allow full passenger and freight services. Because Signal Hill displays a strong orientation to the oil industry, the projected increase in economic activity should be accommodated by improving access routes to the harbor. Additionally, to the extent that Signal Hill is successful in attracting commerce and industry that rely on the port for shipping of finished goods and/or raw materials, accessibility will be a key planning factor.

Trucking Facilities: Signal Hill industrial areas have functional linkages with the Long Beach and Los Angeles harbor areas. Local truck routes are integrated into the regional network (see Figure 1). Port activities are expected to increase significantly by the year 2000, resulting in a doubling of truck trips at the harbor area.[1]

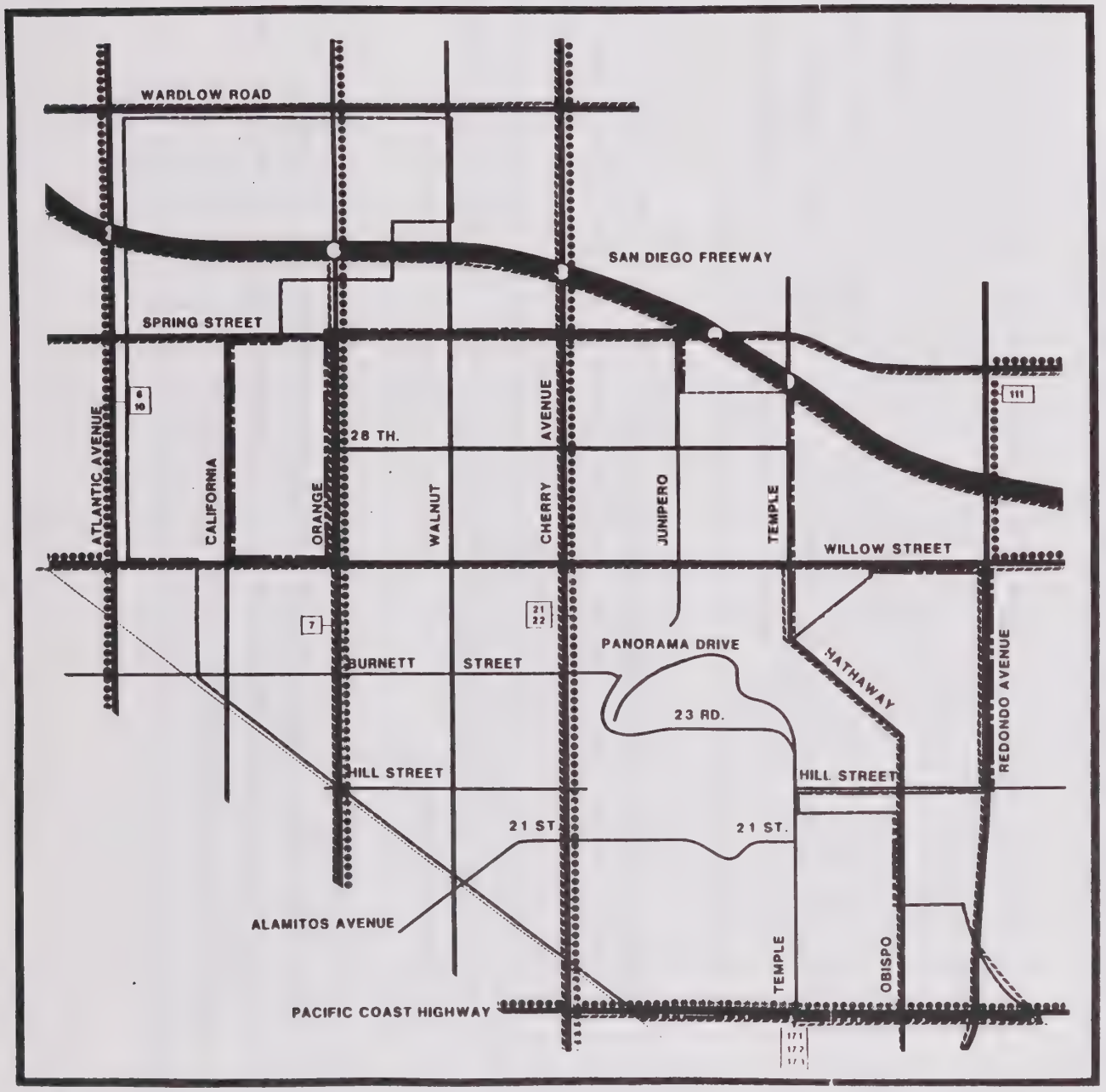
Continued economic development in these areas, as exemplified by the Long Beach World Trade Center, will reinforce the harbor as a regional trucking facility. Plans exist for an Intermodal Container Transfer Facility proposed north of Willow Street and east of Alameda Street, which promises to be an additional regional destination. This facility will transfer container freight between railcars and trucks.

---

1 San Pedro Bay Ports Access Study, Phase 1 Report, Highway Access, SCAG. July 1982.

In addition, industries in Signal Hill have access to other regional trucking facilities and industrial areas through access to the San Diego Freeway and the Long Beach Freeway. Truck terminals established after November 20, 1984, and local access to them are covered by a City ordinance[2], which requires terminal operators to pay the cost of necessary street improvements.

1 Ordinance Number 84-11-937 adopted November 20, 1984. The ordinance regulates terminals established after its effective date.

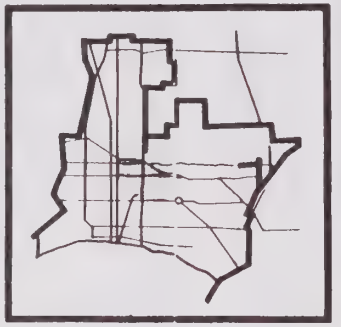


TRUCK AND BUS ROUTES

LEGEND

- Truck Route
- Bus Route
- Route Numbers

SOURCE: Boomsslyan, Darnell, Inc.; City of Long Beach; City of Signal Hill. Long Beach Transit System Map, September 8, 1988.





City of Signal Hill

FIGURE 1

CIRCULATION

2. Local Circulation

In 1983, the City retained Basmaciyan-Darnell, Incorporated (BDI) to produce a City-wide Traffic Engineering Study. This work has been the basis for much of what follows in discussing and analyzing the City's local circulation system.

City of Signal Hill - Major Traffic Generators

Within the City of Signal Hill, there are approximately 8 major employers with 100 or more employees. The largest employers are Pacific Valve (599 employees), Eastman, Inc. (364 employees), General Telephone Company (353 employees) and Petrolane Gas, Inc. (230 employees). Gemco and Beach City Chevrolet are major retail uses that also generate traffic on surrounding roadways.

Also within the City boundaries are several approved developments that will ultimately be major traffic generators. The completion of the Town Center Specific Plan development at Cherry Avenue and Willow Street, including the Price Club, will ultimately attract employees and customers to the area. On the easterly edge of the city along Redondo Avenue and Obispo Street, the Alamitos Land Company development will add approximately 30,000 additional daily trip ends. One other area that is anticipated to increase traffic loads is the redevelopment of the County Hospital site at Redondo Avenue and Willow Street for expansion of Eastman, Inc.

Types of Street and Highway Systems: Signal Hill is served by a network of roadways ranging from freeways, such as Interstate 405 (San Diego Freeway), to local streets, such as Panorama Drive. Existing local roadways can be described by type of roadway, volumes and levels of service, capacity and inefficiencies and linkages to other systems. Each of these features of the existing circulation system is discussed below.

Types of Roadway: The City's existing roadway classification system includes major highways, secondary highways, secondary highways modified, traffic collector streets and local streets, as defined below. The standards for such roadways are also included in the definition of each road classification.

Major Highways are important City and intercommunity routes. A minimum 100-foot right-of-way with four moving traffic lanes and a center median is required.

Secondary Highways serve locally destined traffic tying together the various parts of the city and connecting it to nearby areas. A minimum 80-foot right-of-way with four moving traffic lanes and a center median is required.

Secondary Highways Modified are similar to secondary highways except with a narrower right-of-way. A minimum 70-foot right-of-way with four moving traffic lanes and a center median is required.

Traffic Collector Streets collect and feed local traffic from the important thoroughfares of the system. A 60-foot right-of-way with two moving traffic lanes and two parking lanes is required.

Local Streets are streets designed to serve residential areas. They are intended to serve abutting properties and local traffic. Their purposes are to provide sole and exclusive benefit to the residences fronting upon them and to provide access from residential neighborhoods to adjacent collector streets."

Signal Hill also has a number of streets that were designated on the 1974 adopted Circulation Element and the Official Plan Line Map as local access ways. These roadways are generally the result of older land subdivisions that occurred during the early 1920s and 1930s. Many of these roadways are not fully constructed nor do they have adjacent development. The streets have been identified as "paper streets" because they exist on maps only; the only improvements to the roadways are some grading and oil-treated surfaces.

The San Diego Freeway (I-405), is a vital interregional link in the Signal Hill transportation system. The freeway, established by the State Highway Commission (now the California State Transportation Commission), permits direct access to the City from areas such as Los Angeles, Santa Monica to the north and Orange County to the south. However, the San Diego Freeway has limited access to the City, as described earlier. The freeway is landscaped and maintained by the California Department of Transportation (Caltrans).

Major highways identified in the 1974 Circulation Element include: (a) Cherry Avenue, which extends north/south throughout the city; (b) Orange Avenue, from Spring Street south to the Pacific Electric Railroad; (c) Willow Street, which extends east/west through the City; (d) Spring Street, which extends east/west through the city, and; (e) Pacific Coast Highway, which extends east/west through, and beyond, the City limits.

Cherry Avenue is a four-lane highway north of Willow Street. South of Willow, Cherry is only one lane in each direction to 21st. Between 21st and the south City limits, Cherry has been widened. Orange Avenue is a three-lane major highway providing north/south circulation. Orange Avenue presently provides one lane in each direction and a painted median between Spring Street and Hill Street.

Willow Street is a four-lane highway, with two lanes in each direction and a landscaped center median. Parking is restricted from 4 p.m. to 6 p.m. along the south curb line to provide three lanes eastbound during the p.m. peak hours. Westbound a.m. peak-hour restrictions are currently needed. As traffic volumes increase on Willow Street, permanent parking restrictions will be needed to provide three travel lanes in each direction.

Spring Street is a four-lane roadway, providing two-lane travel capacity for both east and west movement through the City. Spring Street has some left-turn pockets, but signalized turn phasing is not provided.

Pacific Coast Highway (Highway 1) is located in both Long Beach and Signal Hill, and bounds Signal Hill on the south. It provides two travel lanes for both east and westbound traffic, with left-turn pockets for access into the City.

Secondary highways identified in the 1974 Circulation Element include: (a) Redondo Avenue, north of Pacific Coast Highway to the northerly City limit; (b) Temple Avenue; (c) Hathaway Avenue; (d) Junipero Avenue between 28th Street and Spring Street; (e) Orange Avenue from the San Diego Freeway to the northerly City limits: (f) California Avenue south of Spring Street, and; (g) 28th Street between Orange Avenue and Temple Avenue.

One secondary highway modified roadway is identified on the 1974 Circulation Element. This is Walnut Avenue north of the San Diego (I-405) Freeway and between Spring Street and the southerly city limit.

Collector streets include: (a) Temple Avenue from Pacific Coast Highway to Hill Street; (b) Junipero Avenue south of 21st Street; (c) California Avenue north of Spring Street; (d) Burnett Street; (e) Hill Street, and; (f) Alamitos/21st Street. All other roadways are local streets.

Capacity Analysis: In order to determine the efficiency of existing roadways, traffic volumes, levels of service (LOS) and intersection capacity utilization (ICU) are analyzed below. Traffic volume is given in terms of average daily traffic (ADT) by roadway segment for major roads. Level of service is a term used to describe prevailing roadway conditions. It is a qualitative measure of factors such as travel speed, travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience. Qualitative definitions for each LOS are shown in Table 1.

TABLE 1

LEVELS OF SERVICE[1]

Service Level A:	There are no loaded traffic signal cycles, and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.
Service Level B:	This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
Service Level C:	At this level, stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally, drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
Service Level D:	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.
Service Level E:	This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level, all drivers wait through more than one red signal, and frequently through several.
Service Level F:	Jammed conditions. Traffic backed up from a downstream location on one of the streets restricts or prevents movement of traffic through the intersection under consideration.

1 Source: Highway Research Board, Highway Capacity Manual, Special Report #87, 1965.

TABLE 2

EXISTING TRAFFIC CONDITIONS[1]

Roadway Segment	ADT	Existing Capacity	LOS"C" V/C Ratio	LOS"C" Capacity	LOS"D" V/C Ratio
Spring Street at:					
E/O Atlantic Avenue	9,600	30,000	0.32	33,000	0.29
E/O Orange Avenue	11,900	30,000	0.40	33,000	0.36
E/O Walnut Avenue	16,900	30,000	0.56	33,000	0.51
E/O Cherry Avenue	22,500	30,000	0.75	33,000	0.68
E/O Junipero Avenue	24,300	30,000	0.81	33,000	0.74
Willow Street at:					
E/O Atlantic Avenue	29,030	30,000	0.97	33,000	0.88
E/O Walnut Avenue	30,000	30,000	1.00	33,000	0.91
E/O Cherry Avenue	30,000	30,000	1.00	33,000	0.91
E/O Junipero Avenue	31,500	30,000	1.05	33,000	0.95
W/O Redondo Avenue	28,410	30,000	0.95	33,000	0.86
Hill Street at:					
E/O Orange Avenue	1,940	10,000	0.19	12,500	0.16
E/O Walnut Avenue	1,920	10,000	0.19	12,500	0.15
W/O Obispo Avenue	2,920	10,000	0.29	12,500	0.23
Pacific Coast Highway at:					
W/O Temple Avenue	35,600	30,000	1.19	33,000	1.08
E/O Redondo Avenue	38,000	30,000	1.27	33,000	1.15
California Avenue at:					
N/O Spring Street	4,300	10,000	0.42	12,500	0.34
N/O Willow Street	4,500	10,000	0.45	12,500	0.36
S/O Willow Street	4,950	10,000	0.59	12,500	0.40
Orange Avenue at:					
N/O Spring Street	12,260	30,000	0.41	33,000	0.37
N/O Willow Street	10,000	30,000	0.33	33,000	0.30
S/O Willow Street	9,550	30,000	0.32	33,000	0.29
S/O Burnett Street	8,020	30,000	0.27	33,000	0.24
Walnut Avenue at:					
N/O Spring Street	4,320	10,000	0.43	12,500	0.34
S/O Willow Street	6,730	10,000	0.67	12,500	0.54
Cherry Avenue at:					
N/O Spring Street	34,800	30,000	1.16	33,000	1.05
S/O Spring Street	27,000	30,000	0.90	33,000	0.82
S/O Willow Street	19,200	30,000	0.64	33,000	0.58
S/O Hill Street	19,100	30,000	0.64	33,000	0.58
S/O Alamitos Avenue	15,200	30,000	0.51	33,000	0.46
Junipero Avenue at:					
S/O Spring Street	3,270	10,000	0.33	12,500	0.26
N/O Pacific Coast Highway	1,310	10,000	0.13	12,500	0.10
Temple Avenue at:					
S/O Willow Street	9,840	20,000	0.49	22,000	0.45
S/O Hill Street	2,100	20,000	0.11	22,000	0.10
N/O Pacific Coast Highway	1,610	20,000	0.08	22,000	0.07

1 Source: Basmaciyan-Darnell, Inc. City-Wide Traffic Engineering Study, page II-7, September 1984.

In addition to LOS, the efficiency of traffic flow can be expressed in terms of volume to capacity (V/C) ratio. When the V/C ratio is less than 1.0, LOS will not be lower than D. When the V/C is greater than 1.0, then LOS D has been exceeded.

Table 2 shows existing 1984 traffic conditions in Signal Hill by major roadway segments. It illustrates existing ADT as well as the ADT required to reach an LOS of both C and D for that segment. The table further reflects the equivalent V/C ratio for LOS C or LOS D.

As shown in Table 2, most roadway segments are operating at an efficient level of service when LOS C is designated as a standard of efficiency. Those roadway segments operating at LOS D or lower (E or F) are Pacific Coast Highway and Willow Street between Walnut Avenue and Temple Avenue.

Frequently, intersection levels of service play a greater role in determining street performance than do the capacities of roadway sections, since intersections usually create the greatest delays and are thus more objectionable to drivers. ICU analysis for major intersections in the City are shown in Table 3.

As shown, only two major intersections that were analyzed are operating at a LOS of D or E. During a.m. peak hours, both Cherry Avenue at Pacific Coast Highway and Pacific Coast Highway at Obispo Avenue are operating at LOS D. During p.m. peak hours, the same two intersections are operating at LOS E.

Interurban Linkages: As part of the urban fabric of the southern part of Los Angeles County, Signal Hill is linked to other cities through a variety of means. These include telecommunications and other infrastructure, as well as transportation links. Most significant are:

- I-405 Freeway. This links Signal Hill with the extensive system of freeways in Los Angeles and Orange counties, and ultimately to the full interstate system. Principal linkages are for journey-to-work purposes and movement of goods. Less significant are service linkages and recreational travel. It also provides links to other modes of travel (e.g., Los Angeles International Airport).

TABLE 3

SUMMARY OF EXISTING INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE[1]

Intersection	AM Peak Hour ICU	AM Peak Hour LOS	PM Peak Hour ICU	PM Peak Hour LOS
California Avenue at:				
Spring Street	0.39	A	0.54	A
Willow Street	0.44	A	0.76	C
Cherry Avenue at:				
Pacific Coast Highway	0.82	D	0.93	E
Spring Street	0.56	A	0.76	C
Willow Street	0.59	A	0.68	B
21st Street	0.50	A	0.62	B
Orange Avenue at:				
Spring Street	0.61	B	0.72	C
Willow Street	0.58	A	0.61	B
32nd Street	0.63	B	0.70	B
33rd Street	0.63	B	0.80	C
Pacific Coast Highway at:				
Obispo Avenue	0.89	D	0.91	E
Temple Avenue	0.75	C	0.69	B
Willow Street at:				
Temple Avenue	0.63	B	0.69	B
Spring Street at:				
Walnut Avenue	—	—	0.71	C

- o Long Beach Airport. This provides travel linkages for business and pleasure to other urban and metropolitan areas. Both passengers and freight are involved.

- o Arterial Highways. These provide access within the freeway grid for journey-to-work, movement of goods and local service, shopping and recreational travel. Specific linkages include:

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1 Source: Basmaciyan-Darnell, Inc. City-Wide Traffic Engineering Study, page II-5, September 1984.

- Pacific Coast Highway (via one or more north/south connections) provides links to Long Beach CBD, employment, and Port destinations. It also provides access to beach communities to the south.

- Atlantic, Orange, Cherry and Redondo provide links to the beach communities to the south and southwest and employment shopping and other destinations to the north.

- Willow Street provides links to commercial and industrial areas to both the west and east, as well as for journey-to-work purposes.

Truck Routes: The City of Signal Hill Municipal Code now designates truck routes on almost every street in the industrial and commercial sections of the City. The initial purpose in designating so many routes was to permit trucks to gain access to all areas in the community (primarily for oil purposes) and to keep trucks from using local residential streets wherever possible. This situation creates the problem of having to sign each street with truck route signs. To resolve this issue and limit truck route signage, the following streets or portions of streets are recommended as truck routes (see Figure 1). All truck routes link with designated routes in the City of Long Beach, with the exception of Orange Avenue (item #5 below).

1. San Diego Freeway between Atlantic Avenue and Gundry Avenue.
2. Spring Street between Atlantic Avenue and Junipero Avenue.
3. Willow Street between Atlantic Avenue and Temple Avenue.
4. Pacific Coast Highway between Southern Pacific Railroad and Reservoir Drive West.
5. Orange Avenue between San Diego Freeway and Southern Pacific Railroad.
6. Cherry Avenue between Spring Street and Pacific Coast Highway.
7. Temple Avenue between San Diego Freeway and Willow Street.
8. Hathaway Avenue between Willow Street and Obispo Avenue.
9. Obispo Avenue between Hathaway Avenue and Pacific Coast Highway.
10. Redondo Avenue between Willow Street and Hill Street.
11. Redondo Avenue between Grant Street and Pacific Coast Highway.

Dead-end Streets: A number of dead-end street without adequate turnarounds exist in the City. Thirteen of these locations have been investigated as shown in Table 4.

TABLE 4

SUMMARY OF RECOMMENDED STREET END TREATMENT

	Location	Recommended Action
1.	Lewis Ave. s/o Burnett St.	Curb is presently painted red to provide adequate turn-around.
2.	Lemon Ave. s/o 23rd St.	Curb has been painted red 50' on E/S and 30' on W/S marked. 35' street width.
3.	Gundry Ave. n/o Burnett St.	No action needed at this time. Extends from end of public street as access road. Future consideration for cul-de-sac or intersection with future 25th Street.
4.	Gaviota Ave. n/o Hill St.	36' end width, parking ok. Recommended future consideration for cul-de-sac.
5.	Rose Ave. n/o Hill St.	Presently extends as access road through undeveloped property. Recommend future extension to Creston Road.
6.	Legion Ave. n/o Hill St.	Curb is presently painted. No further action needed at this time. Future consideration of cul-de-sac.
7.	Hill St. e/o Cherry Ave.	Curb marked to be painted. Recommended future consideration for cul-de-sac unless undeveloped properly desires to extend roadway northerly to Creston Avenue. Future extension of roadway/cul-de-sac treatment will depend on development proposal.
8.	St. Louis Ave. s/o 19th St.	Post "No Stopping" signs at street end.
9.	Stanley Ave. n/o 20th St.	Driveway exists on W/S. Recommend E/S be painted red 33' to drive, but may not be necessary. Installation of red will remove all on street parking for residence. Need more investigation.
10.	Ohio Ave. n/o 20th St.	Curb is painted red. Four barricades exist at street end. Recommend future consideration of cul-de-sac/or extension or roadway to 21st. Street.
11.	Freeman Ave. n/o 20th St.	Recommend future cul-de-sac or knuckle and extension of roadway west to Orizaba. Future extension to Hill Street is not recommended.
12.	Industry St. w/o Redondo	Existing roadway width and property access drives provide adequate turnaround. No action necessary.
13.	Molino Ave. n/o 20th St.	Existing 1/2 street section. Recommend east curb be painted red and dead-end street signing be installed.

The recommendations presented in Table 4 identify short-term (and in some cases long-term) solutions that would be constructed in conjunction with adjacent development of developed parcels. In areas where the roadway and adjacent land is fully developed, parking restrictions are identified to ensure adequate turnaround dimensions. In the future, if the adjacent parcels redevelop, consideration of additional right-of-way for a cul-de-sac or other type of turn-around should be made.

Parking Facilities: Although parking is currently permitted on most major highways, there are some areas of restriction. Willow Street has some parking restrictions during peak hours, and is expected to require permanent restrictions on both sides within the next 2 years. Parking restrictions, based on traffic counts reported in Tables 2 and 11, are also expected to become necessary on Pacific Coast Highway. Cherry Avenue between Burnett Street and the I-405 Freeway will require parking restrictions during peak hours. Orange Avenue southerly of the I-405 will require permanent parking restrictions; portions of 21st Street east of Cherry Avenue will require similar restrictions because of poor sight distances and visibility.

The City's Zoning Ordinance has been revised a number of times since 1964 to require adequate off-street parking for specific uses; however, nonconforming uses still exist, where adequate parking has not been provided. As a second phase of the City's general plan revision, comprehensive amendments to the Zoning Ordinance will be initiated that will include an analysis of appropriate parking standards for all uses within the City.

3. Integration of Circulation with Land Use

Trip Generation: Information was compiled for 60 geographical areas referred to as traffic analysis zones (TAZs) within the Signal Hill study area. Existing land uses were evaluated and projections developed for the year 2000, as shown in Table 5.

TABLE 5

SUMMARY OF EXISTING AND YEAR 2000 GROWTH IN THE CITY OF SIGNAL HILL[1]

Land Use	Units 1983	Units 2000*
Single-Family Dwelling Units	1,031 d.u.	1,182 d.u.
Multiple-Family Dwelling Units	2,360 d.u.	3,514 d.u.
Commercial (Retail/Service/Hotel)	38.96 ac.	66.96 ac.
Office	41.46 ac.	57.16 ac.
Industrial/Oil Drill Sites	338.45 ac.	437.75 ac.

* Based on land use projections for the year 2000.

For each TAZ, trips were estimated on the basis of trip generation rates and the specific land uses in each TAZ. Trip generation rates shown in Table 6 are a representative average of daily (two-way) traffic that is typically produced and attracted per unit of land in each use category.

Through use of a gravity model, a summary of total trips was developed. The 1984 base condition estimated 1,004,282 total vehicle-trips per day. Estimates for a high growth alternative (identified in the Land Use Element) resulted in 1,229,114 daily trips. This is 228,832 trips over the 1984 base, an increase of 22.4 percent. The moderate growth alternative (the recommended Plan Alternative) resulted in 1,221,415 daily trips. This is 217,133 trips over the 1984 base, an increase of 21.6 percent.[2]

Concerns: In evaluating local and regional circulation, a number of special traffic and circulation problems can be identified.

a. The linkage between Cherry Avenue, Alamitos Avenue and 21st Street: This linkage affects both Long Beach and Signal Hill, and both Cities are exploring opportunities to improve traffic flow in this corridor.

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1 Source: Department of Planning and Community Development, Signal Hill.

2 Source: Basmaciyan-Darnell, Inc. City-Wide Traffic Engineering Study, page II-9, September 1984.

TABLE 6

SUMMARY OF LAND USE CATEGORIES AND TRIP GENERATION RATES[1]

Land Use	Rates
Single-Family Residential	10.0/d.u.*
Two-Family	8.5/d.u.
Multiple-Family	6.5/d.u.
Mobile Homes	5.5/d.u.
Group Quarters	25.0/acre
Community Commercial	900.0/acre
General Commercial	400.0/acre
Restaurant	56.3/KSF*
Commercial Office	240.0/acre
Government Office	600.0/acre
Hotel	10.0/room
Retail	400.0/acre
Service	550.0/acre
Industrial-Light Manufacturing	52.4/acre
Industrial-Heavy Manufacturing	15.6/acre
Industrial Park	117.0/acre
Oil-Related	30.0/acre
Quasi-Public	350.0/acre
Utilities	2.0/acre
Park/Recreation	10.0/acre
Elementary	47.0/acre
Jr./High School	60.0/acre
Private School	80.0/acre

* d.u. - dwelling unit
KSF - 1,000 square feet

Long Beach is examining opportunities for widening Alamitos Avenue/21st Street to provide an east/west arterial corridor to and from its downtown employment activity centers. As proposed, Alamitos Avenue would intersect Cherry Avenue in the vicinity of 21st Street. Signal Hill has several concerns with this concept.

The intersection of Alamitos Avenue/21st Street and Cherry Avenue is presently at the bottom of a steep grade on Cherry Avenue. Vehicles desiring to turn onto/off of the north leg of Cherry Avenue must do so at a significantly reduced speed. For Alamitos Avenue to function as an attractive east/west regional travel facility, the connection with Cherry Avenue would require a large radius curve.

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1 Source: Basmaciyan-Darnell, Inc. City-Wide Traffic Engineering Study, page II-12, September 1984.

The Long Beach proposal for Alamitos and 21st does not compliment the overall Signal Hill circulation system. During peak periods, traffic volumes currently exceed roadway capacity on Cherry Avenue. Anticipated future development in Signal Hill, and in the surrounding portions of Long Beach will result in increased traffic on Cherry Avenue. Improving Alamitos Avenue and enhancing its connection with Cherry Avenue is expected to add significant amounts of new taffic to Cherry Avenue, contributing ever further to an already congested condition. Larger volumes of traffic on 21st Street would disrupt existing land uses, especially if future traffic volumes require street widening. Achieving Long Beach's proposed connection between Alamitos Avenue and Cherry Aveue would also be extremely difficult due to topography.

The City has examined alternatives to the Alamitos Avenue/Cherry Avenue corridor which would enhance the circulation system within the City of Signal Hill and provide the City of Long Beach with their desired travel corridor between downtown activity centers and the surrounding region. Implementation of any one of these alternatives will require close cooperaton between the cities of Long Beach and Signal Hill.

Like Cherry Avenue, Orange Avenue is a north/south arterial providing access to east/west travel facilities (Pacific Coast Highway, Willow Street, Spring Street) and the I-405 Freeway. In its present configuration, Orange Avenue provides one lane in each direction and carries traffic volumes far less than its potential capacity. The 1984 BDI study recommended preserving 80 feet of right-of-way for anticipated future improvements and reducing the currently adopted major highway (100' R/W) classification of Orange to a secondary classification.

Presently, the Long Beach Unified School District and Long Beach City College are working with the City of Long Beach to vacate Alamitos Avenue between Pacific Coast Highway and Walnut Avenue. Preliminary studies of this proposal and anticiapted future growth in downtown Long Beach are expected to add 10,000 to 15,000 additional vehicles in the north/south corridor east of Cherry Avenue to west of Orange Avenue. In addition, traffic on Atlantic Avenue in Long Beach and Cherry Avenue in Signal Hill is expected to approach and/or exceed acceptable capacities with the anticipated traffic volume increases.

With the proposed Alamitos Avenue street vacation, the increased traffic volumes would be attracted to Orange Avenue, provided the roadway was designed to attract the additional traffic loads.

Utilizing the lower 10,000 ADT increases and assigning the traffic to the Orange Avenue Corridor causes the traffic forecasts for Orange Avenue to increase to exceed a secondary highway Level of Service "C" capacity of 20,000 ADT and reach volumes ranging from 20,000 to 24,600 ADT. With these traffic volume forecasts, it is recommended that Orange Avenue from the I-405 San Diego Freeway to south City limit at Hill Street be reclassified a Major Highway (100' right-of-way). Discussions with the City of Long Beach staff found that the City of Long Beach classification currently provides for a major highway classification of Orange Avenue.

The above factors, coupled with the fact that the City of Signal Hill has acquired dedication of major highway roadway widths (100 feet) from several properties along Orange Avenue, make it important to reclassify Orange Avenue as a Major Highway.

Table 11 has been revised to reflect the resulting volume-to-capacity ratios with the major highway classification for Orange Avenue.

The available excess capacity on Orange Avenue as well as its location, make it an attrctive alternative to Cherry Avenue as part of Long Beach's desired Alamitos Avenue travel corridor. It would provide the regional connection to and from downtown Long Beach activity centers, and an attractive travel alternative for regional traffic from the south that would help alleviate congestion along Cherry Avenue.

d. Inconsistent application of roadway standards in commercial/industrial areas in the northern portion of the City: There has been an inconsistent application of standards for roadway widths in commercial and industrial areas generally north of Willow Street to the City limits or the San Diego Freeway. In some areas, roadway are unimproved and/or unpaved; in other areas roadways are excessively wide.

e. Deficient access to the San Diego Freeway: The northbound Cherry Avenue offramp does not provide direct and easy access to the central area of Signal Hill. Northbound traffic must use Temple Avenue to reach Cherry Avenue. Improvements will be required to accommodate expected future traffic flows. Coordination with the City of Long Beach and Caltrans on these improvements will be required.

f. Special problem areas requiring special solutions: There are a number of areas within the City that require special attention. Noted on the Circulation Element Map as "A" areas, they are located between the following streets:

1. Spring and 27th Streets and Atlantic and California Avenues.
2. 28th Street and Willow Avenue, and Orange and Gundry Avenues.
3. Spring and 28th Streets and Cherry and Junipero Avenues.
4. An irregular area surrounding the Hill on three sides, and generally bounded by Combellack Avenue, Hathaway Avenue, Hill Street, 23rd Street, Stanley Avenue and Cherry Avenue.

These areas will require detailed solutions, either through the mechanism of a specific plan or through more detailed analysis at the building permit stage. In either case, specific requirements for circulation facilities will be developed based upon traffic generated, topography and specific site and development characteristics.

Energy/Environmental: The long-term impact on both environmental and energy concerns will ultimately depend on the integration of the circulation system with existing and proposed land uses. The current circulation system is greatly influenced by topography, existing development within the City and development and circulation in surrounding areas. Concern over the consumption of fuel and the dependence on the private automobile is an environmental issue that a circulation plan should address. Because of increasing volumes of air pollutants being emitted, the health

and quality of life and the environment can be threatened. Signal Hill should propose a circulation plan that: (1) encourages a reduced dependence on the automobile; (2) links activity centers together; and (3) that minimizes the number of trips.

4. Public Transit and Paratransit

Bus Routes: Public transportation in Signal Hill is provided by the Long Beach Transportation Company (LBTC), a local municipal bus system. LBTC provides connections to the Southern California Rapid Transit District system on Lakewood Boulevard and Long Beach Boulevard and on the Orange County Transit District system at the Los Alamitos Traffic Circle. The combined services of the three bus systems provide an extensive network of public transit opportunities.[1]

Existing bus lines run north/south along Lakewood Boulevard; Cherry, Orange and Atlantic avenues. Figure 1 shows bus routes in the Signal Hill area; bus stops are listed in Table 7.

TABLE 7

BUS STOP LOCATIONS, LONG BEACH TRANSIT COMPANY

Cherry at	Orange at
Spring	Hill
29th	23rd
28th	Burnett
27th	Willow
Willow	28th
Burnett	29th
Hill	Spring
20th	32nd
RR Tracks	33rd
	Wardlow
Atlantic at	PCH at
Peterson	Redondo
Columbia	Obispo
31st	Orizaba
33rd	Temple
Wardlow	Molino
	Junipero
	Dawson

1 Interviews with Dick Stillwells and Mark Malone, Long Beach Transportation Company, December 1985.

Information on transit ridership in Signal Hill was provided by the LBTC. As indicated in Table 8, approximately 25 percent of riders use the system during morning hours, less then 50 percent use it midday and approximately 30 percent use the system during the evening hours. Riders leaving the City at any time are roughly equal in number to those arriving. Total ridership is about 1,500 people, or 35 percent of the City's resident labor force, and 20 percent of persons working in Signal Hill.

TABLE 8

BUS RIDERSHIP, 1985 LONG BEACH TRANSPORTATION SYSTEM, SIGNAL HILL BUS STOPS

	Riders Leaving Signal Hill		Riders Arriving in Signal Hill	
	#	%	#	%
Morning (12 a.m. - 9 a.m.)	354	23	341	23
Midday (9 a.m. - 3 p.m.)	685	44	647	45
Evening (3 p.m. 0 12 a.m.)	523	33	463	32
	1,562	100	1,451	100

Although ridership information exclusive to Signal Hill is not available by market segment, LBTC has developed information on market segments for their entire service area. Generally, this area is bounded by the San Gabriel River on the east, Santa Fe Avenue on the west, Alondra Boulevard on the north, and the Pacific Ocean on the south. Market segment percentages by fare type are reported as follows:

Fare Type	Percentage
Regular	37.7
Student	27.5
Senior	14.5
Disabled, blind	2.5
Others (transfers, employees, etc.)	17.8
	100.0

Los Angeles/Long Beach Light Rail: Transportation planning in Los Angeles County is evolving toward a more balanced use of alternative modes of travel.[1] In some heavily traveled corridors, existing bus systems are approaching capacity, as are the local streets on which they travel. The next logical regional step will be the construction of alternative transit systems. Although the great bulk of daily travel will continue to be by private automobile, expanded mass transit will provide a more balanced transportation system.

The Los Angeles County Transportation Commission is now implementing a light-rail rapid transit system to serve the Long Beach/Los Angeles corridor. Using existing rail lines, construction has begun for the proposed line. Terminals and intermediate stops are now being designed, with completion expected in 1989. The closest terminal to Signal Hill will be at a station at Willow Street near Long Beach Boulevard in the City of Long Beach. Signal Hill should encourage the establishment of east/west bus linkages, bus turnouts at the station, park-and-ride lots and other programs to encourage ridership. To the extent that the light rail system can reduce peak-hour loads on Signal Hill arterial highways, movement in Signal Hill will be facilitated, and congestion reduced.

Special Paratransit: Paratransit services are currently available to Signal Hill residents. Through a contract with the LBTC, Dial-A-Lift service is provided for handicapped and senior citizens (62 and older) who, in many cases, have limited mobility and access to residential, commercial and recreation activity centers. The service is demand-responsive and provides curb-to-curb pick-up and drop-off. During fiscal year 1984-85, there were approximately 108 riders registered to receive door-to-door service in Signal Hill. This figure increased to 325 eligible riders by the end of fiscal year 1985-86.

5. Bikeways and Pedestrian Circulation:

Bikeway and pedestrian facilities can provide alternative circulation systems within Signal Hill. They can link mixed-use development with living and working areas, and can provide an alternative to the use of energy resources.

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1 County of Los Angeles, General Plan. November 1980, Part V.

The 1974 Circulation Element proposed two bicycle routes that have met with little success. One route was proposed to follow the Pacific Electric right-of-way along the City's southerly boundary (in Long Beach). The second was to cross the City from southwest to northeast. The second pathway was proposed as a linkage between the two Long Beach City College campuses. The major inhibiting physical factors in implementing the plan were the presence of steep roadway grades, conflicting vehicular traffic and the lack of a comprehensive analysis that clearly defined the need for the proposed routes.

The City of Long Beach Open Space Element has designated a bicycle trail along the Pacific Electric right-of-way. In addition, the City of Long Beach has proposed bike pathways that link areas of Long Beach via routes through the City of Signal Hill. One of these pathways is designated along California Avenue and is proposed to extend through the northwest portion of the City of Signal Hill. Another pathway is proposed along Willow Street.

In Signal Hill, the potential for bicycle use is high among school children. Many children reside within easy biking distance of their schools. When biking to school, they must often compete with cars and trucks for right-of-way.

Similarly, use of bikes by those commuting short to medium distances to their places of employment is also possible. However, roadways such as Cherry Avenue, Hill Street and Burnett Avenue/23rd Street east of Cherry Avenue have steep slopes that might discourage bikers.

Before meaningful proposals for bikeways can be recommended, a study of political demand and appropriate route locations should be undertaken. Potential connections with proposed bikeways in Long Beach are important, but should not be a controlling interest. Traffic volumes and characteristics along potential routes must be considered, along with grade problems.

B. Other Infrastructure

1. Energy

Petroleum: Signal Hill has long been one of the largest oil-producing cities in California. The oil field itself is 4 miles long and 1 mile wide, and is centered in Signal Hill extending into the City of Long Beach. Three major oil storage facilities currently operate in Signal Hill: Edgington Oil Company facility on Hathaway Avenue, Signal Hill Terminal facility on Spring Street and Shell Terminal facility on Redondo Avenue. There are also a number of smaller storage facilities in the City. Pipeline corridors are located in almost every major roadway in the City. These facilities are mapped in some detail on Figure 1 in the Safety/Seismic Safety Element. Pipelines carry crude oil, naptha, gasoline, natural gas and well gas, sometimes under high pressures.

Natural Gas: Natural gas is provided to the City of Signal Hill by the Long Beach Gas Department. High-pressure gas lines serve the Lomita Gas Plants on Orange Avenue south of Spring Street, and on Willow Street near Junipero Street. The location of gas lines is shown on Figure 1 in the Safety/Seismic Safety Element. The largest gas main in the City is a 20-inch pipe in Cherry Avenue. It is possible that future service may be provided from this main. The Long Beach Gas Department does not anticipate any future problems in accommodating additional demand for future service. They maintain a 10,000,000 cubic foot storage facility at Junipero and the I-405 Freeway, northeast of the City (Plant #4).

Electricity: Electrical power is provided to the City of Signal Hill by the Southern California Edison Company (SCE). Major transmission and distribution lines are shown on Figure 2. SCE does not anticipate any future problems in accommodating additional demand for service brought on by growth in Signal Hill.

All new industrial, residential, commercial, retail and office developments are required to install underground power lines to service their projects. Limited funds for undergrounding are also provided through a yearly allotment from the Southern California Edison Company. Appropriately, the City has begun identifying those overhead wires that should be placed underground. Discussions with SCE and General Telephone Company should also be undertaken to develop an implementation plan and schedule for such undergrounding.

2. Communications

General Telephone Company of Southern California provides telephone service and supplies to the Signal Hill area. No future problems or constraints in accommodating additional growth are anticipated.

Cable System: Signal Hill residents are provided cable service via the Long Beach Cable Vision Company. Their agreement with the City of Signal Hill extends for 20 years, effective October 15, 1985.

The majority of existing cable service is provided by aboveground cable networks with transmission cables suspended from both telephone and power poles. The present system covers all but one-third of the city. Service extends along the southeast City boundaries from Willow Street to California Avenue. The northside of the city is not currently wired to receive cable service.

Two types of plants operate the available cable systems. The first and oldest type is a 33-channel plant built in 1965 and located on the southside of the hill. A newer, 104-channel plant has just been built within the last 2 years and is capable of providing cable service to those residents living east of the hill.

Due to the recent transfer in ownership of the franchise cable system, several new changes to expand the prevailing system will take place shortly. These include, but are not limited to:

1. Rebuilding and rewiring the current 33-channel system to a 104-channel system.
2. Installing new line amplifiers.
3. Installing new cables along the lines, depending on whether they are above or below ground.
4. Installing new drops from lines (or pedestals) to residences.

Because service will be upgraded and expanded, no limitations imposed by additional service demands are anticipated.

Hilltop Antennas: A number of radio antennas are located at the top of the Hill between 23rd Street and Panorama Drive. These are noted in the Hilltop Specific Plan and are characterized as having potential negative impacts. The Specific Plan contemplates their eventual removal and/or consolidation. Existing facilities are legal nonconforming uses.

3. Public Services

Sewer and Sanitary Waste: Signal Hill sanitary sewers connect to the City of Long Beach sewer system (see Figure 3, Sanitary Sewers). Drainage District 2 in Columbia Street at Atlantic Boulevard contains an 8-inch sewer adjacent to Long Beach that provides this linkage. The City of Long Beach also collects flows from Drainage District No. 1 through a 21-inch trunk sewer at the intersection of the San Diego Freeway and Walnut Avenue. Prior to construction of the San Diego Freeway, a 12-inch sewer continued down Walnut Avenue and across Spring Street to a lift station (No. 4). Following construction, the Signal Hill 12-inch sewer was diverted into the Long Beach trunk sewer system which ultimately flows to the Los Angeles County Sanitation District No. 3 outfall, located west of Signal Hill.

Sewage treatment service to Signal Hill is provided by the County Sanitation Districts of Los Angles County Sanitation District. The districts are responsible for the construction, operation and maintenance of facilities to collect, treat and diagnose sewage and industrial waste. The construction and connection of local sewers and laterals to the district has been and will remain the responsibility of the City of Signal Hill. Any major development in the Hill area will require review and approval by the City to assure that existing activities can accommodate additional needs within the units of the collection facility capacity. For a more detailed description of the Signal Hill sewer system, refer to the City of Signal Hill Master Sewer Plan, March 1984.

Solid Waste: Solid waste collection is performed by the Signal Hill Disposal Company under contract with the city. Refuse is currently being distributed to the Los Angles County landfill at Puente Hills, No. 6. This is a Class II landfill, receiving liquid and solid waste and having an estimated life of approximately 40 years. Based upon population and solid waste projections, it is unlikely that this company will have any difficulty meeting the needs of future growth in Signal Hill. As discussed in the

Safety Element, Class I disposal facilities for hazardous and toxic materials are limited in Southern California.

Water Distribution: Existing water conditions for Signal Hill can be viewed in terms of water supply, source, amount and demand (e.g., amount utilized in total and per capita or land use).

Water Supply: Current water supply for the City of Signal Hill is provided by the City Water Department, which relies on both municipal resources as well as water imports (see Figure 4, Water Facilities). Daily water supplies are derived from a system of municipal water wells and reservoirs, with additional emergency water resources available from interconnections with the City of Long Beach water system. Signal Hill municipal water resources include three reservoirs: Gundry Reservoir, Hilltop Tanks and Temple Avenue Tanks. Gundry Reservoir is a 4.7 million-gallon storage facility that receives all water pumped from the municipal wells. The Gundry reservoir serves as a forebay for a booster station that lifts water into the water distribution system; the Temple Avenue Tanks (two of them at the site) also act as a forebay for another booster station that lifts water from a level below 200 feet to one of 200 feet and above.

In addition to these reservoirs, the municipal water system includes two wells located in the City of Long Beach. Water is also supplied by the Central Basin Water Association, from which additional water rights can be purchased based upon necessity. The second lower feeder of the Metropolitan Water District of Southern California (MWD) supplements Signal Hill, municipal water well resources. This feeder line is located in Bixby Road near Gaviota Street.

Lastly, emergency water resources are supplied to Signal Hill via seven interconnections into the Long Beach municipal water system. Four of the most significant interconnections are located along Willow Street.

The amount of water available for use in Signal Hill from existing reservoirs is given in Table 9.

TABLE 9

SIGNAL HILL WATER DEPARTMENT WATER STORAGE CAPACITY[1]

Source	Storage Capacity (in gallons)
Gundry Reservoir	4,700,000
Hilltop Tanks	50,000
Temple Avenue Tanks	600,000
Total	5,350,000

A new 5,000,000 gallon reservoir is planned to be constructed on the Hill in the future. This reservoir will replace the Hilltop Avenue and Temple Avenue tanks.

Water Demand: Demand for water in the City is divided among a variety of land uses such as residences, commerce, and industry. In addition, Signal Hill is somewhat unique in that it supplies water for oil recovery through water injection techniques. Water is used in Signal Hill as shown in Table 10.

TABLE 10

ESTIMATED WATER CONSUMPTION RATE BY LAND USE

Land use	Daily Consumption Factor
Office	200 gal/1,000 sf[2]
Research/Development	50 gal/1,000 sf[2]
Warehouse	50 gal/1,000 sf[2]
Commercial	200 gal/1,000 sf[2]
Irrigation	320 gal/1,000 sf[2]
Residential	250 gal/du[3]

1 Sources: Jim Hinzdel & Associates, Inc., Draft Environmental Impact Report, Belmont Vista Development, page IV-49, February 1985, and Willdan Associates, Water System Master Plan, City of Signal Hill, page 18, February 1977.

2 Atlantis Scientific, Draft Environmental Impact Report, Long Beach Signal Hill Business Center, page 5-30, March 1985.

3 City of Signal Hill. Draft Environmental Impact Report, Commercial Town Center Specific Plan. November 1982. pp. 34a.

Flood and Drainage Control: The Los Angles County Flood Control District is responsible for the provision of standards for local drainage within the Flood Control District. The district is responsible for rivers, streams and washes designated as major water courses and the construction of channels to accommodate a 4-day rainfall storm, with maximum rainfall occurring on the fourth day based on a 50-year frequency rainfall statistic (capital storm).

Signal Hill is specifically responsible for drainage control on a very localized basis. Local systems are most frequently designed to accommodate the runoff of a 10-year frequency storm (see Figure 5).

The existing system of storm drains in Signal Hill is adequate to protect the city against flooding from a 10-year frequency storm, with the addition of several key improvements. These include projects in Spring Street (Walnut to 300 feet west of Orange) and Walnut Avenue (28th to Spring Street), in Stanley Avenue (Coast Highway to 20th Street) and 19th Street (Cherry Avenue to Molino Avenue), in 20th Street (Orizaba Avenue to Obispo Avenue), and in the Pacific Electric Railroad right-of-way (Walnut Avenue northwesterly to California Avenue).

There is one additional area that requires a localized drainage solution. This area is located between 28th and Columbia streets, and Atlantic and California avenues and is part of an "A" designated area on the Circulation Plan Map. Storm waters accumulate in this area because of the topography, and will require a solution as part of the detailed planning anticipated at the time of development.

III. NEEDS, ISSUES AND CONSTRAINTS

A. Introduction

The previous section, "Background and Existing Conditions," described circulation networks, their relationship to land uses, and other infrastructure systems in Signal Hill. These facilities and services will grow and change as they are impacted by development in and around Signal Hill. In addition, traffic volumes on regional transportation facilities traversing the City also result from travel demand generated in other parts of the Southern California metropolis as well.

To provide policy guidance for future development, existing conditions must be combined with defined needs and related to other elements of the comprehensive plan. Following such a definition and comparison, the City must examine its resources, limitations or constraints to determine if the needs can or should be met.

B. Needs and Issues

1. Future Circulation/Transportation Needs

Roadways: Vehicular traffic in Signal Hill is expected to increase from 1,004,000 vehicles per day (VPD) in 1984 to more than 1,221,000 VPD in the year 2000. This is an increase of 21.6 percent and is based on the moderate growth alternative.

The highest projected traffic volumes are expected on Willow Street with a range of 38,400 to 52,000 VPD. Other highways projected to carry significant volumes will include Pacific Coast Highway (43,900 to 52,300 VPD), Spring Street (17,300 to 29,400 VPD), Cherry Avenue (18,800 to 44,700 VPD) and Orange Avenue (20,000 to 24,600 VPD). Obispo Avenue between Hill Street and Pacific Coast Highway is expected to carry 17,300 VPD, and Atlantic Avenue, which is partially within the City's sphere of influence, is expected to carry between 24,900 and 31,000 VPD. Redondo Avenue, also partially within the City's sphere of influence will carry between 23,100 and 36,000 VPD. See Table 11 for more detailed projections of traffic in the year 2000.

TABLE 11

FUTURE TRAFFIC CONDITIONS[1]

Roadway Segment	Year 2000 ADT	Los "C" Capacity	V/C Ratio	Los "D" Capacity	V/C Ratio
Spring Street at:					
E/O Atlantic Avenue	17,300	30,000	0.58	33,000	0.52
E/O Orange Avenue	17,700	30,000	0.59	33,000	0.54
E/O Walnut Avenue	24,600	30,000	0.82	33,000	0.75
E/O Cherry Avenue	29,400	30,000	0.98	33,000	0.89
E/O Junipero Avenue	N/A[2]	30,000	-	33,000	-
Willow Street at:					
E/O Atlantic Avenue	40,200	45,000	0.89	49,500	0.81
E/O Walnut Avenue	41,800	45,000	0.93	49,500	0.84
E/O Cherry Avenue	49,500	45,000	1.10	49,500	1.00
E/O Junipero Avenue	52,300	45,000	1.16	49,500	1.06
W/O Redondo Avenue	38,400	45,000	0.85	49,500	0.78
Hill Street at:					
E/O Orange Avenue	2,000	20,000	0.10	22,000	0.11
E/O Walnut Avenue	3,000	20,000	0.15	22,000	0.14
W/O Obispo Avenue	5,700	20,000	0.29	22,000	0.26
Pacific Coast Highway at:					
W/O Temple Avenue	43,900	45,000	0.98	49,500	0.89
E/O Redondo Avenue	52,300	45,000	1.16	49,500	1.06
California Avenue at:					
N/O Spring Street	4,500	20,000	0.23	22,000	0.20
N/O Willow Street	5,000	20,000	0.25	22,000	0.23
S/O Willow Street	5,100	20,000	0.26	22,000	0.23
Orange Avenue at:					
N/O Spring Street[3]	24,600	30,000	0.82	33,000	0.75
N/O Willow Street[3]	24,500	30,000	0.72	33,000	0.65
S/O Willow Street[3]	23,100	30,000	0.77	33,000	0.71
S/O Burnett Street[3]	20,000	30,000	0.67	33,000	0.61
Walnut Avenue at:					
N/O Spring Street	7,700	20,000	0.39	22,000	0.35
S/O Willow Street	6,900	20,000	0.35	22,000	0.31
Cherry Avenue at:					
N/O Spring Street	44,700	30,000	1.49	33,000	1.35
S/O Spring Street	39,400	30,000	1.31	33,000	1.19
S/O Willow Street	26,200	30,000	0.87	33,000	0.79
N/O Hill Street	25,900	30,000	0.86	33,000	0.78
S/O Alamitos Avenue	18,800	30,000	0.63	33,000	0.57
Temple Avenue at:					
N/O Willow Street	10,800	20,000	0.54	22,000	0.49
S/O Hill Street	3,000	20,000	0.15	22,000	0.14

[1]Source: Basmaciyan-Darnell, Inc. City-Wide Traffic Engineering Study, Page II-17, September 1984; and drawing titled "City of Signal Hill, Future Daily Traffic Volumes, Year 2000 - Medium Intensity Growth". (n.d.November 1985.)

[2]N/A = Project not available.

[3]Source: Basmaciyan-Darnell, Inc. (Oct.1987)

A comparison of Table 11 with Table 2 will point up the expected change in traffic demand. Willow Street, for instance, can expect an increase of from 35 percent to 66 percent, depending on the street segment. Cherry Avenue can expect an increase in VPD of from 24 percent to 28 percent. Spring Street can expect an increase of from 31 percent to 80 percent.

Table 11 summarizes year 2000 average daily traffic on major highways in the City based on a moderate growth alternative. Also presented in Table 11 are levels of service (LOS) that represent the recommended roadway classifications. Using the LOS "C" and "D" criteria (see Table 1), volume to capacity (V/C) ratios were calculated. These ratios relate expected volume to design capacity, and measure the efficiency of the street. Level "D" ratios are lower than level "C" ratios, since level "D" is a lower level of service (i.e., more congestion). At any level of service, a ratio of less than 1.0 means that the roadway segment is carrying less traffic than its respective LOS capacity; a ratio greater than 1.0 means that the roadway exceeds its respective LOS capacity. Generally, roadway segments are planned for LOS "C" capacity and intersections are planned for LOS "D" capacity. When a roadway segment reaches or exceeds its LOS "C" capacity, careful review of major intersections along the segment is required.

The roadway segments that are expected to exceed level "C" capacities by the year 2000 include:

Willow Street, east of Cherry
Willow Street, east of Junipero
Pacific Coast Highway, east of Redondo Avenue
Cherry Avenue, north of Spring Street
Cherry Avenue, south of Spring Street

In addition, the following roadway segments have a V/C ratio of over 0.90 and are approaching their LOS "C" capacity.

Willow Street, east of Walnut Avenue
Pacific Coast Highway, west of Temple Avenue
Spring Street, east of Cherry Avenue

These eight roadway segments will be the most seriously deficient in street capacity in 2000 based on the medium growth scenario. Other segments with relatively high ratios may also require remedial treatment, depending upon the pace of development.

BDI has determined that both Willow Street and Pacific Coast Highway will require six traffic lanes during peak hours, and possibly six lanes at all times. This solution may also require restrictions or elimination of parking on these streets. Furthermore, California Avenue, Walnut Avenue and 28th Street cannot be widened in all spots beyond current rights-of-way because of existing development.

Traffic conditions should be monitored on a regular basis. Analysis of trend data in light of additional traffic expected from adjacent land uses will enable Signal Hill to anticipate and mitigate problems before they become acute.

Intersections: The operating conditions at intersections within the City of Signal Hill need continued monitoring and improvement to accommodate existing and future traffic safety and efficiency. As development in the City of Signal Hill and surrounding Long Beach area occurs, traffic conditions will change and the need for additional improvements is anticipated. These will include traffic signals, left-turn phasing at existing signalized intersections and increased length of left-turn lanes. It will be necessary to continue to montior activity within the city and develop solutions in advance or as problems arise.

Freeway Ramps: Accessibility to the I-405 was previously identified as inadequate and inconvenient. Improvement of the Cherry Avenue northbound offramp is needed to permit southbound access to Cherry Avenue. The Temple Avenue ramp is also inadequate to serve future travel demands; the overcrossing has capacity constraints and no northbound onramp is provided.

Truck Routes: To simplify truck routes and enforcement problems associated with trucks, a revised truck route plan has been developed by the City. Implementation of the plan will require the City Council to adopt the appropriate ordinance replacing the existing truck route and truck prohibitions on various City streets (see Figure 1).

Public Transit: A bus connection to the light rail line stop at Willow Street and Long Beach Boulevard would increase accessibility to Signal Hill employment areas, and reduce unnecessary dependence on the automobile. A demand for paratransit service has also been demonstrated by Signal Hill residents, with high ridership on the Dial-a-Lift program provided by the Long Beach Transit Company. Continued coordinatd planning with the Long Beach Transit Company will require in the area of public transit.

2. Special Areas of Concern

Hilltop Area: The Hill is the focal point for the City of Signal Hill. Development of this area is currently controlled by the Hilltop Specific Plan, adopted by the City in July 1983. The plan recommended closure of some streets and alleys in order to consolidate existing lots. As future development of the Hilltop occurs, the City will require roadway and infrastructure improvements as aprt of the site plan review and approval process, or the subdivision process.

Special Study Areas: There are seven additional areas in the City that will require special circulation studies prior to development. Such studies would precisely define land use, circulation and other elements necessary to their successful development. In some cases, this precise planning will be triggered by the normal and usual development process; in other cases, the City may initiate a specific plan study. These areas are designated as "A" areas on the Circulation Element Map and are located between:

- Spring and 27th Street and Atlantic and California Avenues
- 28th Street and 25th Street, Orange and Gundry Avenues
- 21st and 19th Street, Obispo and Molino Avenues
- An irregular area surrounding the Hill on three sides and generally bounded by Combellack Avenue, Hathaway Avenue, Hill Street, 23rd Street, Stanley Avenue and Cherry Avenue.
- The area generally between Pacific Coast Highway and 19th Street.
- The area generally between the dead ends of Rose and Gaviota Avenues, and Creston Avenue.
- The area north of the San Diego Freeway west of Walnut Avenue and east of Orange Avenue.

- o Spring and 28th Streets and Cherry and Junipero Avenues
- o An irregular area surrounding the Hill on three sides and generally bounded by Combellack Avenue, Hathaway Avenue, Hill Street, 23rd Street, Stanley Avenue and Cherry Avenue.

3. Traffic Control Improvements

Automobile, bicycle and pedestrian circulation in Signal Hill is controlled by a variety of traffic devices. It is important that traffic signs, pavement legends, street striping, curb markings and traffic signals are consistently located and/or maintained.

4. Bicycle and Pedestrian Pathways

A study to define needs for bicycle facilities and routes is needed. Possible elements of the study might include:

a. Potential user demand.

b. Identification of exclusive opportunities (scenic and view areas, greenbelt development as discussed in the Environmental Resources Element, and other similar potentials).

c. Definition of constraints (grade limitations, right-of-way availability, safety and similar considerations).

d. Route planning.

e. A review of financing and implementation mechanisms.

Collaboration and coordination with the City of Long Beach and the Long Beach Unified School District should be encouraged in undertaking any future studies.

5. Other Infrastructure Needs

Energy: Major needs related to transportation of petroleum and gas products have been discussed in the Safety Element. Neither natural gas nor electrical energy providers anticipate difficulty in meeting expected future demand in the City during the planning period. Funding resources for undergrounding existing power lines are limited; a thorough study, schedule and funding plan is required.

Communication: Neither the telephone company nor the cable television provider anticipate future problems in accommodating future demands. Needed expansion of cable services to residents of the north side will take place within the next year.

Public Services: Generally, public infrastructure facilities and services in Signal Hill are adequate and needs are few. The impact of new developments on infrastructure systems must continue to be assessed, especially as residential, industrial and commercial uses increase. Specific needs identified include:

- A disposal site or sites in Southern California for Class I toxic and hazardous materials, as identified in the Safety Element.
- The currently planned 5 million-gallon water storage tank.
- Drainage improvement projects located in:
  - Spring Street (Walnut Avenue to 300 feet west of Orange Avenue)
  - Walnut Avenue (28th Street to Spring Street)
  - Stanley Avenue (Coast Highway to 20th Street
  - 19th Street (Cherry Avenue to Molino Avenue)
  - 20th Street (Orizaba Avenue to Obispo Avenue)
  - PERR right-of-way (Walnut Avenue northwesterly to California Avenue)
- A drainage solution to the area located between Atlantic and California Avenues and Columbia and 28th Streets, which may be resolved when the area converts from oil use to urban use.

C. Constraints

1. Future Circulation/Transportation Constraints

Roadway Capacities: As traffic volumes increase in Signal Hill and the surrounding area of Long Beach, there will be pressure to increase roadway capacities. In many cases, existing rights-of-way are insufficient and traffic engineering solutions must be sought. Additional right-of-way would be available as vacant properties develop, but there is no guarantee that the timing of development will coincide with need for additional roadway capacity. In some cases, property is already developed adjacent to roadways that are anticipated to need widening. A series of interim and permanent special solutions may be required.

2. Jurisdictional Responsibilities

Coordination and collaboration with the City of Long Beach and Caltrans will be required to improve freeway accessibility and to resolve traffic problems on Pacific Coast Highway. The City must also work with Long Beach to resolve the Alamitos/21st/Cherry/Orange issue and to reconcile truck route inconsistencies. Electrical and communication systems undergrounding programs require collaboration with respective utilities. Flood control, sanitary sewer systems and waste disposal are also largely outside of the City's control. In all these areas, interjurisdictional cooperation and collaboration must be maintained.

3. Dependence on the Automobile

Residents of Signal Hill, like most people in Southern California, are dependent on the automobile for most travel. This is currently an effective mode of travel for many trips, with the exception of subregional journey-to-work trips. In addition, many local streets are experiencing reduced efficiency, especially in commercial and industrial areas at peak hours. As the economy of Signal Hill grows within the context of the larger regional economy, travel demands will increase. Total dependence on the automobile will mean increased congestion. Current efforts to develop a light-rail system serving the southern part of Los Angeles County may slow the rate at which roadways become congested.

4. Fiscal Limitations

Circulation and infrastructure needs are typically granted high priorities in municipal capital budgets. Nevertheless, funds are ultimately limited, and the list of competing projects with high levels of need and community support is long. Signal Hill must look to creative financing methods for obtaining needed rights-of-way, intersection improvements, and infrastructure development.

IV. GOALS AND POLICIES

Goals, policies and programs are intended to serve as a framework to guide the future development of circulation and infrastructure systems. The goals and policies listed below respond to local circulation and infrastructure needs and issues previously identified.

The Circulation Element Map (Figure 6) serves as a policy map to be used in conjunction with goals and policies in this section, and programs listed in Section V.

GOAL 1

Provide for a safe, efficient and balanced circulation system that serves future land use needs consistent with the City's ability to finance and maintain such a system while minimizing negative environmental impacts.

POLICY 1.1

Classify and construct roadways with the following minimum right-of-way widths:

Classification	Right-of-Way Width
Major Highway	100.00 feet to 110.00 feet
Secondary Highway	80.00 feet
Secondary Highway-Modified	70.00 feet
Local Collector	60.00 feet
Local Streets	60.00 feet
Alley	20.00 feet

POLICY 1.2

Construct existing roadways to planned width, as new developments are constructed in existing neighborhoods and new areas.

POLICY 1.3

Encourage the efficient use of parking facilities, including provision for shared use of facilities, smaller vehicles and other provisions to improve the effectiveness of city codes and ordinances.

POLICY 1.4

Encourage the retention of Long Beach Airport consistent with maintaining safe flight operations, avoiding noise impacts and ensuring compatibility with land uses in Signal Hill.

POLICY 1.5

Develop and improve roadways and intersections in the City consistent with available funding; scheduling shall be coordinated with land use plans to ensure the orderly extension of circulation facilities and to preserve a free-flowing circulation system.

POLICY 1.6

Consistent with financial resources, implement operational measures to maximize efficiency of the existing circulation system to minimize delay and congestion.

POLICY 1.7

Continue to require dedication of right-of-way and construction of required public improvements on streets adjacent to construction projects at the developer's expense.

POLICY 1.8

Define and evaluate alternative financing methods for transportation system improvements and maintenance costs on a Citywide and area basis.

POLICY 1.9

Support implementation of short- and long-range transportation measures that reduce air pollution from transportation sources as recommended by the South Coast Air Quality Management District.

POLICY 1.10

Direct through traffic from local streets to collector, secondary and major highways to reduce traffic on local streets, improve neighborhood safety and environmental quality.

POLICY 1.11

Minimize effects of transportation-related noise wherever possible to comply with the Noise Element (see Noise Element for relevant implementation measures).

POLICY 1.12

Discourage on-street loading and unloading of commercial and industrial products.

POLICY 1.13

Provide public circulation facilities in the City whenever possible which are accessible to persons with physical disabilities.

POLICY 1.14

Encourage alternatives to the private automobile by increasing accessibility to public transit and developing a pedestrian and bicycle system.

POLICY 1.15

Assist in providing an efficient regional circulation system through coordination with the City of Long Beach, the County of Los Angeles, Caltrans and other agencies as needed.

GOAL 2

The circulation system will provide an identifiable City image.

POLICY 2.1

Enhance the important role that streetscapes play in defining the character of the City by expanding street planning and design procedures to include aesthetic and environmental concerns, as well as traffic considerations.

POLICY 2.2

Provide special design treatment to scenic highway corridors and streets in greenbelt areas.

GOAL 3

Provide complete, safe, and efficient public utility systems that serve future land use needs consistent with the City's ability to finance and construct those facilities.

POLICY 3.1

Annually define needs and deficiencies that are within the City's sphere of responsibility, and introduce the most urgent projects into the City's budget process.

POLICY 3.2

Coordinate and collaborate with other agencies providing public utility services to Signal Hill to define areawide and regional needs, projects, and responsibilities.

POLICY 3.3

Continue to specify those infrastructure costs that are required by and chargeable to new development.

POLICY 3.4

Coordinate the construction of all public utilities to minimize disruption to vehicular traffic and negative impact on roadways.

V. IMPLEMENTATION - STRATEGY AND PROGRAMS

The following programs are action statements to implement the framework established by goals and policies. Generally, programs are the most definitive means for accomplishing community needs, since they are, where possible, quantitative guides for the management of circulation and infrastructure systems in the City.

	Implementation Program	Corresponding Policy
1.	The City shall establish setback lines for future right-of-way to protect ultimate roadway integrity through the use of the Official Plan Lines Map with the following changes:	1.1, 1.2, 1.7
	a. Add a new category entitled "Local Collectors" with a minimum right-of-way of 60 feet. Show the following streets in this category:	1.1, 1.2, 1.7
	(1) California Avenue from Spring Street to north City limits.	
	(2) Burnett Street from California Avenue to its connection with 23rd Street.	
	(3) 23rd Street from its connection with Burnett Street to Temple Avenue.	
	(4) Hill Street from the west City limits to Cherry Avenue.	
	(5) Hill Street from Temple Avenue to the east City limits.	
	(6) Junipero Avenue from Pacific Coast Highway to 21st Street.	
	(7) Temple Avenue from Pacific Coast Highway to 23rd Street.	
	(8) Alamitos Avenue from the west City limits to its connection with 21st Street.	
	(9) 21st Street from its connection with Alamitos Avenue to Temple Avenue.	
	b. Change 28th Street between Orange Avenue and Temple Avenue from a Secondary Highway to a Secondary Highway Modified.	

	Implementation Program	Corresponding Policy
2.	Infrastructure projects shall be reviewed to ensure conformance with the Circulation and Infrastructure Element other elements of the General Plan.	1.1, 1.5, 1.13, 2.1, 2.2, 3.2, 3.4
3.	As part of the City's development review process, continue to require dedication of necessary right-of-way and improvement of streets and infrastructure at developer's expense pursuant to Chapter 12 of the Signal Hill Municipal Code.	1.1, 1.2, 1.7, 3.3
4.	As property in the Hilltop and Town Center Specific Plan areas develops, require circulation and infrastructure improvements in conformance with those Specific Plans, as well as with the Circulation and Infrastructure Element of the General Plan.	1.1, 1.2, 1.7, 2.1, 2.2, 3.1, 3.3
5.	Complete a parking needs study, include issues such as guest parking standards for condominiums, shared-use of parking facilities, parking for smaller vehicles, etc. Recommend appropriate changes to City codes, ordinances, regulations and procedures.	1.3
6.	Encourage the retention of Long Beach Airport and lobby the City's concerns for maintaining safe flight operations, avoiding noise impacts, and assuring land use compatibility adjacent to the airport.	1.4, 1.16, 1.17
7.	Determine desirable circulation and infrastructure improvements for "A" areas noted on the Circulation Element Map (Figure 6). Where development proceeds in advance of the City's ability to prepare such plans, require analysis by affected property owners or developers, and as appropriate require conformance to such plans. Recommend amendments to City plans and policies as required in each instance.	1.5, 1.7, 2.1, 2.2, 3.1, 3.3
8.	Improve the following intersections. Schedule such improvements as part of the City's capital budgeting process. a. Pacific Coast Highway at Obispo Avenue b. Temple Street at 21st Street c. Walnut Avenue at 28th Street d. Ellis Avenue at Temple Street	1.5, 1.6
9.	Improve the following street ends. Schedule such improvements as part of the City's capital budgeting process. a. Gundry Avenue north of Burnett Street b. Rose Avenue north of Hill Street c. Hill Street east of Cherry Avenue	1.5, 1.6

Implementation Program	Corresponding Policy

9 (contined)

d. St. Louis Avenue south of 19th Street
e. Stanley Avenue north of 20th Street
f. Ohio Avenue north of 20th Street
g. Freeman Avenue north of 20th Street
h. Molino Avenue north of 20th Street

10. Improve the following high-accident intersection locations. Schedule such improvements as a part of the City's capital budget process. — 1.5, 1.6

a. Cherry Avenue at Willow Street
b. Orange Avenue at Willow Street
c. Pacific Coast Highway at Redondo Avenue
d. Orange Avenue at Spring Street
e. Spring Street at California Avenue
f. Cherry Avenue at 21st Street
g. Cherry Avenue at 19th Street
h. Cherry Avenue at Hill Street
i. Pacific Coast Highway at Obispo Avenue
j. St. Louis Avenue at 21st Street
k. Hill Street at Orange Avenue
l. Hill Street at Walnut Avenue
m. Orange Avenue at Burnett Street
n. Juniper Avenue at 28th Street
o. Temple Avenue at Wall Street

11. Monitor traffic congestion on major highways, with special attention to Willow Street and Pacific Coast Highway. As traffic volumes approach or exceed LOS "C", increase capacity through restricting on-street parking, signal timing, and other traffic engineering measures, as appropriate. — 1.6

12. Design and implement a land use/traffic generation monitoring system to provide information on expected increases in traffic. As the system indicates overload conditions, modifications to existing plans and policies will be suggested. — 1.1, 1.6, 1.10

13. Annually review the City's funding sources for street and highway improvements needs, including requirements placed upon developing property. Examine the feasibility of implementing a traffic impact fee. — 1.8

	Implementation Program	Corresponding Policy
14.	Define ways of increasing the efficiency of public streets through encouraging increased use of high occupancy vehicles (i.e., vanpools and carpools). Involve private employers and other affected jurisdictions in such a study. Include considerations of cost, responsibility, and public and private actions.	1.9
15.	Work with Long Beach Transit Company in defining the need for additional transit service in Signal Hill, especially on Willow Street.	1.9, 1.16
16.	With the use of Proposition A funds, support the continuation of Dial-A-Lift services in Signal Hill. When such funds are no longer available, seek alternative funding sources.	1.9, 1.16
17.	All specific plans prepared by the City shall formally consider the feasibility and impact of transit facilities.	1.9, 1.16
18.	Study the feasibility of developing a public information program to encourage employers with more than 100 employees to adopt transit management measures, such as staggered work hours, ridesharing, and other incentives to reduce vehicle use.	1.9, 1.16
19.	Prepare a comprehensive study and recommendation for bicycle and pedestrian pathways in the City.	1.16
20.	In concert with Caltrans and the City of Long Beach, develop a detailed plan and financing program for improvement of access to and from the I-405 Freeway. Specific concerns include improvements to the northbound Cherry Avenue offramps and the Temple Avenue ramps, and improvement of the Orange Avenue ramps.	1.17
21.	Continue to coordinate with the City of Long Beach on the resolution of mutual traffic problems, including: a. Alamitos/21st/Cherry/Orange corridors. b. Alamitos/Walnut intersection. c. Improvement of Pacific Coast Highway. d. Continuity of truck routes. e. Spring Street widening.	1.17
22.	Where it is demonstrated that existing roads and paper streets and alleys are not necessary, institute abandonment proceedings.	1.5, 1.6

	Implementation Program	Corresponding Policy
23.	As part of the development review process, consider the impact of new driveway locations and midblock access points on traffic flow. Driveways and access points that create traffic hazards shall not be permitted. Loading and unloading of trucks on public thoroughfares shall also be prohibited.	1.6
24.	Regularly review existing traffic conditions and traffic control devices to improve efficiency.	1.5, 1.6, 1.10, 1.11, 2.2
25.	Work with appropriate regional agencies to identify additional capacity for treatment and disposal of Class I hazardous and toxic wastes. Continue to enforce and implement City ordinances regulating industrial wastes.	3.2
26.	Coordinate and collaborate with agencies having regional and area responsibility for utility infrastructure planning and service provision; share information on current and projected needs and demands; advocate, as appropriate, at regional and state levels.	3.2
27.	Develop a long-range program for undergrounding or relocating overhead distribution facilities, telephone lines and other utility systems. Collaborate with the City of Long Beach, the Edison Company, General Telephone, and Long Beach Cablevision.	3.1, 3.2, 3.3
28.	Develop a 5-year Capital Improvements Program for street, water, traffic, drainage and other public works improvements.	1.1, 1.2, 1.5, 1.6, 1.7, 1.8, 1.13, 1.14, 1.15, 2,2, 3.1, 3.2, 3.3, 3.4

VI. STREET AND HIGHWAY STANDARDS

A. Design Standards

The City of Signal Hill Circulation Element identifies and classifies all arterial highways in the city. There are four classifications:

1. Major - A four- to six-lane divided highway with 100 to 110 feet of right-of-way. This highway carries the most traffic of all the arterial classifications.

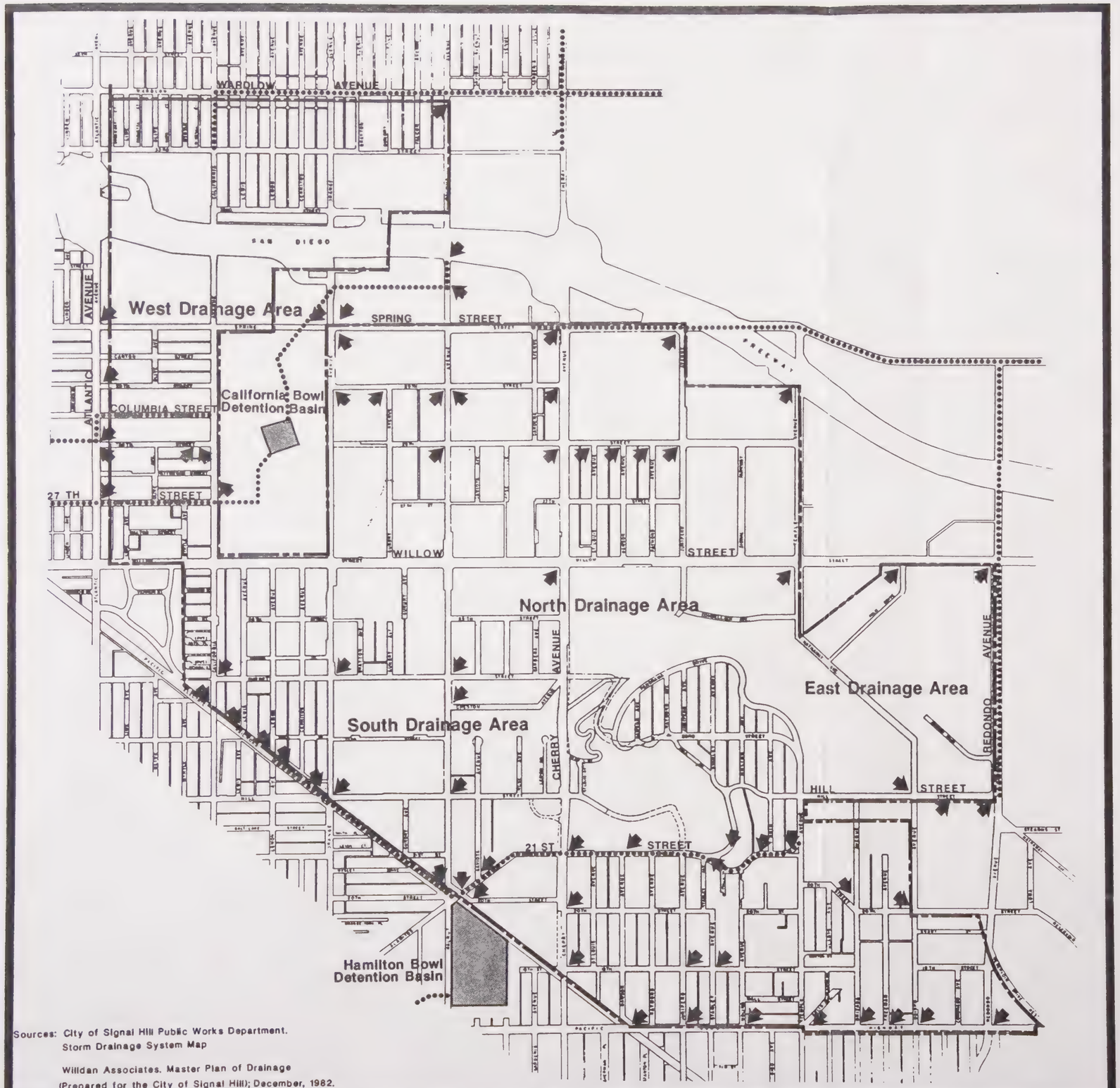
2. Secondary - A four-lane undivided highway with a minimum 80 feet of right-of-way.

3. Secondary Modified - A three- or four-lane undivided highway with a minimum right-of-way of 70 feet.

4. Local Collector - A two-lane undivided highway with a minimum right-of-way of 60 feet.

General design requirements for the construction of roadways within the City are available from the Public Works Department. Items such as street widths, design speed, horizontal and vertical alignment, access to arterials, local street design criteria, drainage, sewers and sanitary sewerage are included.

DRAINAGE



Sources: City of Signal Hill Public Works Department.
Storm Drainage System Map

Willdan Associates. Master Plan of Drainage
(Prepared for the City of Signal Hill); December, 1982.

LEGEND

- Storm Drain
- Direction of water flow
- Detention Basin

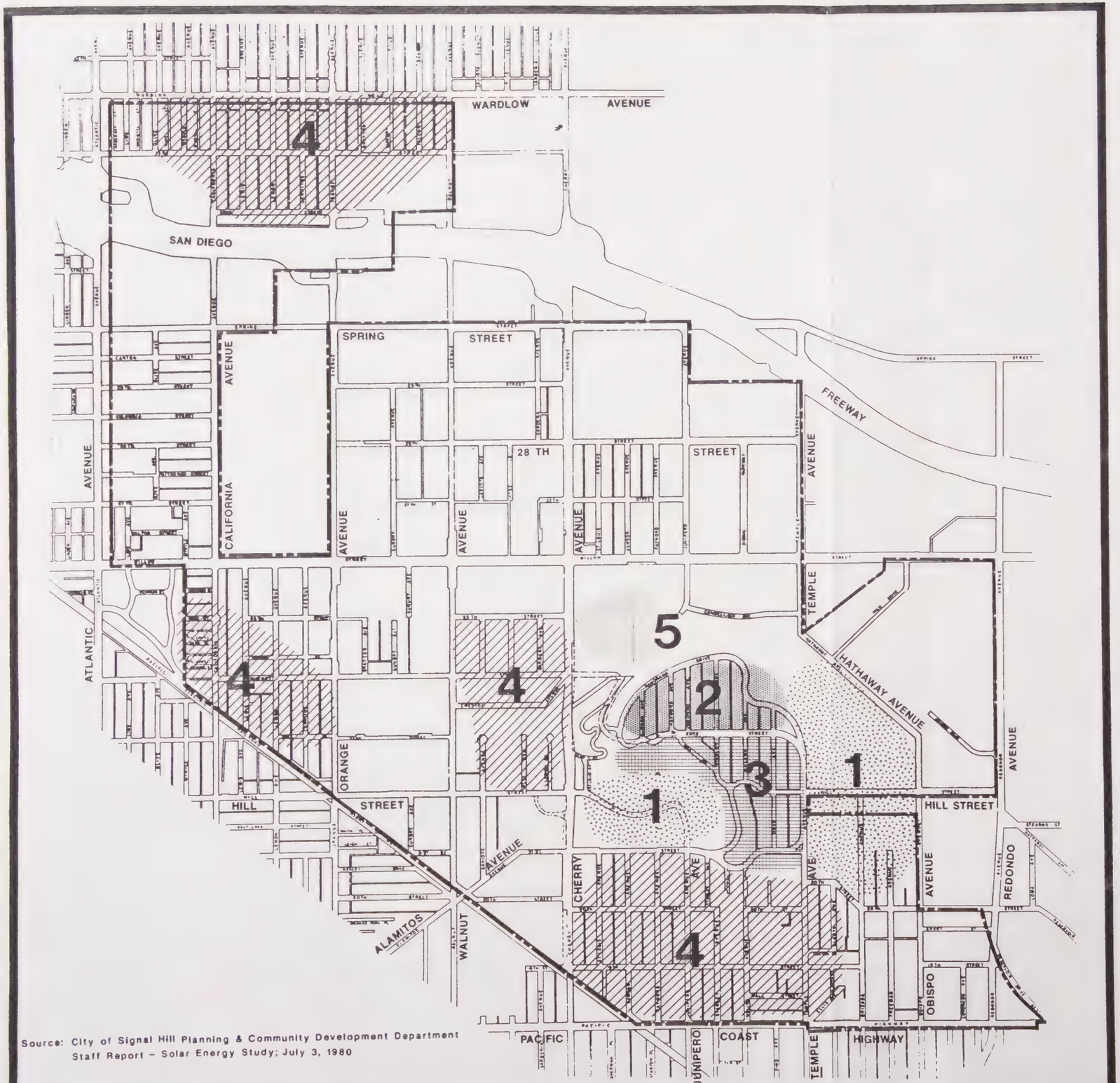


0 600 1200 1800

City of Signal Hill

FIGURE 1

ENV. RES.



Source: City of Signal Hill Planning & Community Development Department
Staff Report – Solar Energy Study; July 3, 1980

SOLAR POTENTIAL

LEGEND

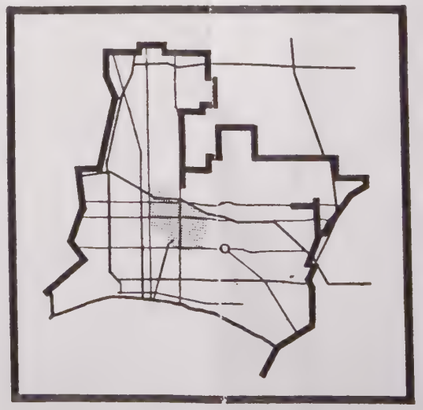
1 **Type 1 Solar Potential:** designated low-density residential; largely undeveloped area; future and retrofit solar potential is high.

2 **Type 2 Solar Potential:** designated medium-density residential; currently being developed; excellent year round solar access.

3 **Type 3 Solar Potential:** area is low-density residential; portions currently under development; solar retrofit potential is good.

4 **Type 4 Solar Potential:** mixed density residential designations; most land developed; generally limited to poor solar potential.

5 **Type 5 Solar Potential:** designated as town center; undeveloped; poor solar access.



0 600 1200 1800

City of Signal Hill

FIGURE 4
ENV. RES.

ENVIRONMENTAL RESOURCES ELEMENT
of the
SIGNAL HILL GENERAL PLAN

City of Signal Hill

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* Maps are located in Signal Hill Planning Department.

I. INTRODUCTION

A. Purpose and Scope

The purpose of the Environmental Resources Element is to improve the overall quality of life for Signal Hill residents through proper guidance in the management of natural resources and open space lands. The goals, policies and implementation programs for the Signal Hill Environmental Resource Element are guidelines that will direct the timing, location, amount and uses of resources, such as air, groundwater, soils, wildlife and minerals, as well as those properties that are generally unimproved.

Data in the Signal Hill Environmental Resources Element reveals current conditions for the atmospheric environment, water and hydrology, land resources, biological resources, historical, paleontological and archaeological resources and open space and energy resources.

B. Legislative Authorization

The State of California recognizes open space lands as a valuable resource not only for their aesthetic, recreational and public health qualities, but as a limited natural resource. The state also recognizes that all natural resources are limited and, along with open space lands, are part of an overall ecosystem. The state has mandated, therefore, that each city prepare Open Space and Conservation Elements in its General Plan to provide overall, comprehensive guidelines for the protection and proper management of open space lands and natural resources. The Signal Hill Environmental Resources Element is a combination of the required Open Space and Conservation Elements and includes all state-mandated requirements for each element.

California state law defines open space land as "...any parcel or area of land or water which is essentially unimproved and devoted to an open-space use...."[1] Section 65560 of the California Government Code describes the requirements for the open space element as follows:

---

1 State of California. Government Code Section 65560 (b).

"...(1) for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life...; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams and watershed lands; (2) open space used for the managed production of resources, including but not limited to, forest lands, rangeland, agricultural lands and areas of economic importance for the production of food or fiber; areas required for recharge of groundwater basins; bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and areas containing major mineral deposits, including those in short supply; (3) open space for outdoor recreation, including but not limited to, areas of outstanding scenic, historic and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails and scenic highway corridors; (4) open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality."

California Government Code Section 65302(d) specifies that the purpose of a Conservation Element is "...for the conservation, development and utilization of natural resources, including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources." In addition, "...the conservation element may also cover: (1) the reclamation of land and waters; (2) prevention and control of the pollution of streams and other waters; (3) regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan; (4) prevention, control and correction of the erosion of soils, beaches and shores; (5) protection of watersheds; (6) the location, quantity and quality of the rock, sand and gravel resources; and (7) flood control."

C. Justification for Combination of the Conservation and Open Space Elements

Conservation and open space elements are complementary and can be legally combined into one, as in the City of Signal Hill Environmental Resources Element. Since requirements for the Conservation Element closely parallel those categories for an Open Space Element that deal with "...open space for preservation of natural resources and open space for the managed production of resources," they are closely linked and should be combined.

D. Relationship of the Environmental Resources Element to Other General Plan Elements

The Environmental Resources Element is perhaps most closely related to the Land Use Element in the Signal Hill General Plan. Both elements examine and provide policy guidelines related to natural resources (e.g., water, agriculture, soil, mineral and wildlife resources) and aesthetic, cultural and recreational resources (e.g., parks, scenic areas, views and public access). The Environmental Resources Element is also related to the land use, safety and noise elements in terms of hazards (e.g., oil production and flooding). For example, the Land Use Element provides guidelines for regulating the development of residential land uses in sloped areas, whereas the Environmental Resources Element locates and defines those areas and specifies means of reducing the hazards where possible.

II. BACKGROUND AND EXISTING CONDITIONS

A. Atmospheric Environment

1. Climate

Signal Hill is located within the South Coast Air Basin. The annual average temperature in the city ranges from the mid 50 degrees Fahrenheit (°F) in winter to the mid 70°F in the summer. Average temperatures in January range from 46°F to 65°F and in July from 62°F to 82°F. Freezing conditions and temperatures over 100° occur infrequently. Annual precipitation varies, with a long-term average of about 15.4 inches per year. Annual average relative humidity in January ranges from 50 to 75 percent daily, whereas in July it varies from 60 to 85 percent.

The prevailing wind pattern is a daytime sea breeze, flowing toward the east and northeast with little seasonal variability. Nighttime winds are light, and although variable, often have an offshore character that flows toward the south/southwest. During the fall and early winter, Santa Ana wind conditions sometimes occur. These relatively strong winds flow from the mountains in the east toward the southwest in the vicinity of Signal Hill and generally increase local temperatures.

2. Air Quality

The South Coast Air Basin experiences light average wind speeds, which results in the slow dilution of air contaminants. The vertical dispersion of air contaminants within the South Coast Air Basin is frequently limited by the presence of a persistent thermal inversion, or inversions, between ground level and about 1,500 feet (a thermal inversion is an atmospheric layer exhibiting a sudden rise in temperature with increasing height above the ground). A thermal inversion generally traps vertical air movement, preventing it from mixing upward and dispersing. The distance from the ground surface to the bottom of the lowest inversion layer is called the "mixing height." This height frequently increases vertically during the day. Winter inversions frequently break up completely by midmorning. Summer inversions often break up in the afternoon. This phenomenon, along with the arrival of the sea breeze front, sometimes results in a sudden clearing up of visible smog during summer afternoons in the coastal areas.

Most air pollutants are released near the ground surface and mix upward as far as the mixing height will allow. A combination of a low inversion and low windspeed results in the least dilution and greatest concentrations of air contaminants. Air pollution levels are lowest when there is no inversion and moderate to strong windspeeds (10 mph or more) are prevalent.

These atmospheric conditions usually follow a daily and seasonal pattern. Pollutant concentrations of carbon monoxide and nitrogen oxides can be highest during the night and early morning hours. Photochemical smog (ozone, etc.) is the principal concern during summer and early fall due to greater solar intensity and a low mixing height level. Ozone levels are at their lowest during winter months due to an increased mixing height during the hours of strong sunlight.

Air quality in an area is a function of the primary and secondary pollutants, the existing regional ambient air quality, and the topographical and meteorological factors influencing the transport and dispersion of pollutants. Air quality is determined by both primary and secondary air pollutants. Primary pollutants are emitted from a source into the atmosphere and include carbon monoxide (CO), oxides of nitrogen (NOx), reactive organic compounds (ROC), nitrogen dioxide (NO_2), sulfur dioxide (SO_2) and total suspended particulates (TSP). Secondary pollutants are created with the passage of time in the air mass by chemical and photochemical reactions. Examples of secondary pollutants include oxidants, primarily ozone (O_3) and sulfate particulates.

3. Ambient Air Quality

Ambient air quality is given in terms of state and federal standards adopted to protect public health with a margin of safety. Air quality trends are shown in Table 1. In addition to ambient standards, California has adopted episode criteria for oxidants, carbon monoxide, sulfur dioxide, nitrogen dioxide and particulate matter. The episode levels represent short-term exposures at which public health is actually threatened. Air quality data are collected by the South Coast Air Quality Management District (SCAQMD). The SCAQMD air monitoring station located at Long Beach Airport is most representative of Signal Hill's ambient air quality. Table 1 is based on data from this station, and the following air quality trends have developed in Signal Hill.

TABLE 1

AIR QUALITY TRENDS, 1981-1984
LONG BEACH AIR QUALITY MONITORING STATION[1]

	1981	1982	1983	1984
Ozone (O_3)				
Highest concentration (parts per million)	0.23	0.22	0.30	0.27
Number of days state/federal standards exceeded	30/13	18/6	35/16	32/13
Carbon Monoxide (CO)				
Highest concentration (parts per million)	13.0	14.0	14.0	14.0
Number of days state/federal standards exceeded	0/0	0/0	0/0	0/0
Nitrogen Dioxide (NO_2)				
Highest concentration (parts per million)	0.37	0.30	0.37	0.35
Number of days state/federal standards exceeded	13/ND	4/ND	3/ND	7/1
Sulfur Dioxide (SO_2)				
Highest concentration (parts per million)	0.14	0.09	0.12	0.32
Number of days state/federal standards exceeded	0/0	0/0	0/0	1/0
Total Suspended Particulates (TSP)				
Highest concentration (micrograms per cubic meter)	292	192	212	195
Number of days state/federal standards exceeded	22/2	13/0	16/0	15/0

Ozone: Ozone is the air pollutant of primary concern in Signal Hill and adjacent areas. Ozone is formed by the reaction of hydrocarbons and oxides of nitrogen in the presence of bright sunlight. Pollutants emitted upwind react while being carried downwind to produce the oxidant concentrations experienced in this area. The state 1-hour ozone standard was exceeded an average of 29 days each year at the Long Beach air monitoring station and federal standards were exceeded an average of 12 days each year from 1981-1984.

Carbon Monoxide: Carbon monoxide is a primary pollutant that is concentrated near major roadways and freeways. Carbon monoxide levels did not exceed state or federal standards between 1981 and 1984.

Nitrogen Dioxide: Nitrogen dioxide levels exceeded the state NO_2 standard an average of 7 days each year between 1981 and 1984, and an average of 0.25 days per year during this period.

1 South Coast Air Quality Management District, Air Quality Data 1981-1984. California Air Resources Board, Air Quality Data, 1985.

Sulfur Dioxide: State sulfur dioxide standards were exceeded an average of 0.25 days per year during the period 1981 to 1984. Federal standards were not exceeded.

Total Suspended Particulates: The state particulate standard was exceeded an average of 17 days each year, monitored at the Long Beach Station. These episodes are primarily due to natural sources, but are also linked to grading operations and motor vehicle emissions. The federal particulates standard was exceeded and average of 0.50 days each year from 1981 to 1984.

4. Air Quality Management

The State Lewis Air Quality Act (1976) and the Federal Clean Air Act Amendments (1977) require the development of a program to meet state and federal air quality standards in the South Coast Air Basin (SoCAB). The state has indicated a time frame of "...at the earliest achievable date" and the federal government required attainment of all primary national ambient air quality standards by 1982, with a possible extension of attainment deadlines to 1987 for carbon monoxide and photochemical oxidants. The SoCAB has been designated a nonattainment area for oxidants, carbon monoxide, nitrogen dioxide and total suspended particulates.

In February 1979, the Southern California Association of Governments (SCAG) and the South Coast Air Quality Management District (SCAQMD) adopted the Air Quality Management Plan (AQMP) for the South Coast Air Basin. After several revisions, the AQMP was adopted by SCAG and the SCAQMD on October 15, 1982. AQMP projections and mitigation measures are based on the SCAG-82A Growth Forecasts. The AQMP recommends control measures that, when implemented, will succeed in reducing primary air emissions to the level of the state and federal air quality standards by 1987. The control measures rely heavily on continued technical improvements to both stationary and mobile pollution control equipment and the implementation of transit, rideshare and congestion relief.

Rules and Regulations: The SCAQMD has published a set of "Rules and Regulations" to reduce both stationary and mobile source pollutant emissions. This document outlines permits, fees prohibitions, procedures for hearings, emergency measures,

order to abatement, standards of performance for new stationary sources, and standards for additional specific air contaminants (Federal Register, Vol. 46, No. 13, January 13, 1981).

Of particular concern to cities within the South Coast Air Basin is Regulation IV, Prohibitions, of the "Rules and Regulations," which relates to the emission of fugitive dust (Rule 403). Regulation IV is one of the few rules and regulations applicable to site-specific projects that has feasible means of reducing fugitive dust. Rule 403 mandates that "...a person shall not cause or allow fugitive dust emissions from any transport, handling, construction, or storage activity, so that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source." Also, "...a person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, cleaning of land and solid waste disposal operations" (Rule 403(b)) and "...to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations" (Rule 403(d)).

Los Angeles County Subregional Element: Los Angeles County has developed a "Subregional Element for the 1982 Regional Air Quality Management Plan." Several measures are listed in the Los Angeles element that may have applicability to future projects in Signal Hill. These include encouraging new development to incorporate commercial and industrial uses near residential communities to reduce trips and trip lengths. The element also encourages several parking strategies, carpool and bus alternatives, the promotion of bicycle rack installation, and tree and shrub planting to improve air quality.

B. Hydrology

1. Surface Water

Surface water in Signal Hill occurs in the form of runoff that follows the topographic features of the Hill.[1] Figure 1, Drainage, shows the overall surface water flow pattern in Signal Hill. In the past, the City has been subject to flooding in the low-

1 Note: The Hill is the highest point and the most notable topographic feature of Signal Hill. It is located in the southeast portion of the City and is a major feature of community identity.

lying hill areas. Although the amounts of waterflows were not of great volume, the steep terrain of the hill resulted in rapid runoff volumes.

Regional flood control for Signal Hill and all of Los Angeles County is under the jurisdiction of the Los Angeles County Flood Control District (LACFCD). The LACFCD has responsibility over the rivers, streams and washes in the county that are designated as major water courses and for establishing standards for local drainage within the Flood Control District. Flooding in the District has been nearly eliminated through the coordinated effort of the LACFCD, the United States Army Corps of Engineers, other federal agencies, private developers and the cities within the county.

The LACFCD owns and maintains three major flood control facilities in and around the City of Signal Hill for flood control. These facilities are known as the Spring Street Storm Drain, the Hamilton Bowl Detention Basin, and the California Bowl Detention Basin. These are shown on Figure 1, Drainage.

The Spring Street Storm Drain system provides flood protection for the north and east drainage areas of the city. This storm drain system consists of a main storm drain and four lateral storm drain systems. The main storm drain is located along Spring Street, extending from the intersection of Cherry Avenue to the east City limits. The storm drain ultimately joins the Los Cerritos Channel in the City of Long Beach. The four lateral systems are located along Cherry Avenue, Junipero Avenue, Temple Avenue and Redondo Avenue. These lateral systems intercept street flow traveling in a northerly direction away from the hilltop area.

The Hamilton Bowl Detention Basin provides flood protection for a major portion of the south drainage area of the city, as well as a large area of the City of Long Beach. The basin is located in the City of Long Beach, along the north side of Pacific Coast Highway between Walnut and Cherry avenues, in what has historically been a sump area. Two storm drain systems join the basin from the City of Signal Hill and collect storm runoff traveling as street flow in a southerly direction. The first system consists of a primary storm drain along the Southern Pacific Transport Company right-of-way, and a lateral system along Orange Avenue. The second system consists of a primary drain along Walnut Avenue and a lateral system along 21st Street.

The California Bowl Detention Basin is located between Spring Street, Orange Avenue, Willow Street, and California Avenue in the City of Long Beach. This basin provides flood protection for the west drainage area of the city. Presently, storm runoff in the area east of the basin is conveyed as street flow in a northerly direction to a City of Long Beach storm drain located along the south side of the San Diego Freeway. This drain conveys these street flows and runoff from the San Diego Freeway to the basin. The basin outlets into a storm drain located along 27th Street and is ultimately discharged into the Los Angeles River.

In addition to these major drainage facilities, three minor storm drains exist within the City. These storm drains are the uppermost reaches of major drainage facilities existing within the City of Long Beach (see Figure 1, Drainage).

The first storm drain is located along Wardlow Road, with a lateral drain along California Avenue and Cherry Avenue. This drain provides flood protection for the portion of the City located north of the San Diego Freeway.

The second minor drain is located in the west drainage area of the city. This drain serves as an outlet storm drain for a sump condition that exists at the intersection of Atlantic Avenue and Columbia Street.

The third minor drain is located in the south drainage area of the city along 21st Street. This storm drain receives runoff from the area between Junipero Avenue, 21st Street, Temple Avenue and Pacific Coast Highway.[1]

2. Groundwater

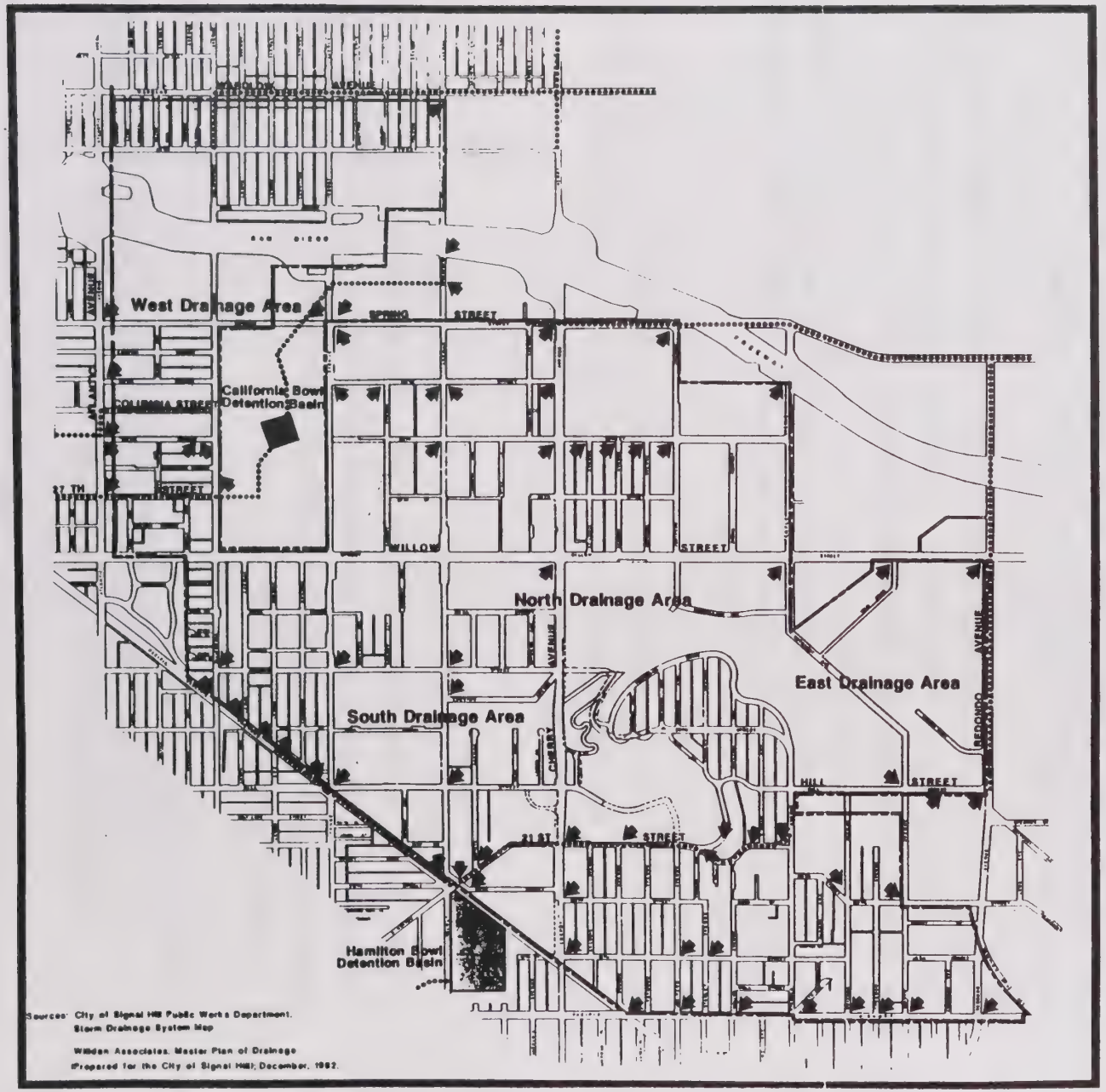
Signal Hill is located within the Long Beach Plain groundwater basin. The basin includes the Gage, Lynwood, Silverado and Sunnyside aquifers, which developed in the buried stream channels and flood plain deposits of the ancient Los Angeles and San Gabriel River drainage courses.[2]

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1 City of Signal Hill, The Master Plan of Drainage (p.5).

2 Jim Hinzdel and Associates. Draft Environmental Impact Report (Tentative Tract 43263) for Belmont Vista Development. February 1985. p IV-2.

DRAINAGE



Sources: City of Signal Hill Public Works Department, Storm Drainage System Map

Wilson Associates, Master Plan of Drainage (Prepared for the City of Signal Hill, December, 1982.

LEGEND

- Storm Drain
- Direction of water flow
- Detention Basin





Signal Hill

FIGURE 1

Water from the basin and delivered to Signal Hill residents is of good quality. All county, state and federal water quality standards have been met or exceeded in the past and in the current water supply. There are occasional consumer complaints about rust in the system that are remedied immediately by flushing the lines involved. Water supply is discussed in some detail in the Circulation and Infrastructure Element.

C. Land Resources

1. Geology

Knowledge and awareness of the community's underlying geologic structure and proximity to major fault lines is critical for the many land use and developmental possibilities in the seismically active area of Southern California. The land in Los Angeles County is in a youthful state of geological evolution, and is considered unstable.[1] Many active and potentially active earthquake faults are found in the county. Liquefaction, landsliding, shattered ridges, land settlement, tsunamis and seiches are other seismic-related hazards found in the region. Many areas are subject to local earth movement, such as landslides, rockslides and subsidence. Rocks and soils prone to instability include alluvium, terrace deposits, shale, metamorphic schist and siltstone.

Identification of geologic hazards and seismic risk in Signal Hill is essential because of the City's close proximity to the most important geologic feature in the Southern California region: the Newport-Inglewood Fault. Movement within this fault region was responsible for the 1933 Long Beach earthquake, which registered 8.3 on the Richter scale (refer to the Safety Element for additional discussion on seismic hazards).

The Newport-Inglewood Fault is a normal fault with a strike slip fault component. Several other well-known, potentially active faults are located within the same geographical area as the Newport-Inglewood Fault: the Cherry Hill Fault, the Dickler Fault, the Northeast Flank Fault and the Reservoir Hill Fault (refer to the Safety Element, Figure 2, and Section II.B., Geologic Hazards of the Safety Element).

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1 Los Angeles County General Plan. November 1980.

2. Soils

Signal Hill is located in an area known as the Los Angeles Coastal Plain. The plain sits on an extraordinarily deep marine and nonmarine sedimentary base that has an important bearing on earthquakes, petroleum deposits and subsidence problems. Table 2 shows geologic zones in Signal Hill.

TABLE 2

GEOLOGIC ZONES

Zone	Thickness (feet)		Composition
—	500		Sand, reddish-brown, silty, poorly consolidated; siltstone; and gravel
—	—		
Upper Gas zone	1,750	2,500	Sand, gray, medium to coarse grained, poorly consolidated, pebbly. Shale, olive to dark brown, massive, silty.
Upper Wilbur zone	2,500		
Lower Wilbur zone	2,650	2,500	Sand, fine to coarse grained, occasionally pebbly, with thin calcareous sandstone interbeds. Shale, dark grey to dark brown, sandy, micaceous.
Alamitos zone	3,000		
Brown zone	4,800	9,000	Sand, light grey, fine to medium grained, massive, firm to friable, with thin interbeds of silt and silty shale. Shale dark brown to gray-black, hard, fissile, biotitic.
Deep zone	5,500		
—			
DeSoto zone	9,500		
—	—	—	Talcshist, green to bluish green, containing some glaucophane and quartz.

Source: City of Signal Hill. Derived from summary of California Oil Fields, State Division of Oil and Gas, 1968.

For the most part, soils within the City are composed of weathered alluvium and are thus classified as silts and sands. The following is a description of the soil composition and conditions in the City.

Southeast Section: Upper natural soils consist of fine to medium fine sand and silty sand generally nonexpansive with isolated areas of slightly expansive, sandy clays and clayey fine sands. Fill materials are scattered in this area and vary in depth up to 25 feet.

Southwest Section: Upper natural soils consist of sand, very fine to fine to medium, silty sand and clayey fine to medium sand essentially nonexpansive. Fill materials may also be encountered throughout the area up to 18 feet deep, generally in the petroleum production areas.

East Central Section: Upper natural soils consist of clean sands, silty sands, silts and sandy silts, and silty and sandy clays. There is a slight change in soil composition from nonexpansive in the eastern portions of this area to slightly expansive in the western portions of the area. High contamination of natural soils occurs with petroleum production operations in this section. Fill materials of varying depth may be found throughout this section and are mixed with a considerable amount of inorganic debris.

West Central Section: Natural soils consist of fine sands, silty sands, clayey sands and sandy clay. Soils are slightly to moderately expansive. Traces of oil in the upper native soil can be found due to petroleum production operations in this section. Fill materials to 25 feet in depth are located in oil production areas.

Northern Section: Upper natural soils consist of silty clays and clayey silts. These soils are, in general, moderately expansive except in the eastern area, which is highly expansive.

3. Topography and Slope

The City of Signal Hill's topographic features are the surface expression of underlying geologic conditions and are one of many major factors in determining the suitability of land for development. Properties of very steep slope for example, may be unsuitable for intensive development unless extensive engineering is used to ensure structural stability.

The overall topography is the most predominant characteristic that gives Signal Hill its unique physical form (Figure 2, Geologic Hazards of the Safety Element). In this City of approximately 2.25 square miles, slopes vary from 10 to 80 percent. Slopes are steepest surrounding the Hill. This feature is one of a series of anticlinal or upfaulted hills that formed along the Newport-Inglewood Fault Zone (refer to

Figure 2, Safety Element). In the southwest portion of the City, the boundary elevation is 25 feet above sea level and terminates at the hilltop plateau at an elevation of 370 feet above sea level. The greatest percentage of slope change occurs on the southerly slopes of the Hill with an average of 40 percent slope and increasing in some areas to as much as 80 percent slope. In the adjacent areas of the City, the slope change is more gradual, in most cases only 5 to 10 percent.

Major portions of the Hill do not consist of uniform slopes. In most cases, roads and pads have been cut to facilitate road access to service the oil equipment and development. The cuts create steep slopes that terminate in a flat terrace shape. This condition occurs on many of the Hill's major slopes; for example, those extending from the southwest, at the intersection of 21st Street and Cherry Avenue, along the western and northern faces, and terminating in the northeast, near Hathaway Street. Therefore, the Hill's slopes, as illustrated on the slope map, are somewhat misleading; in reality, portions of the land that have been cut for roadways and other development create steeper slopes than the overall topography depicts.

4. Petroleum Resources

The City of Signal Hill's history has been tied to oil production. The Long Beach Oil Field was discovered with the completion of "Alamitos No. 1" by Shell Oil Company in March 1921. This first well was located at the corner of Temple Avenue and Hill Street in what is now Signal Hill. The discovery spawned the speculative oil development of the area, setting the stage for what resulted in one of the largest historical oil fields in the state. Trapped mainly against the Cherry Hill Fault are some of the world's thickest oil-saturated sand beds, collectively known as the Long Beach Oil Field. The oil field, over 4 miles long and 1 mile wide, is located primarily within the City of Signal Hill; it also extends into the City of Long Beach. Six oil-producing zones are recognized in the field: (1) Upper Wilbur Zone; (2) Lower Wilbur Zone; (3) Alamitos Zone; (4) Brown Zone; (5) Deep Zone; (6) DeSoto Zone (also see the preceding soils section).

As of January 1984, the cumulative production from the Long Beach Oil Field, largely centered in Signal Hill, has been over one billion barrels of crude petroleum, making it one of the largest fields in the state. The field covers approximately 1,205 productive acres, and recovery-per-acre was at one time the highest in the world.

Over 2,400 oil wells have been drilled in the field, of which approximately 600 active producing wells currently remain within the City of Signal Hill. These Signal Hill wells produced approximately 2,575,000 barrels of oil in 1982, an average daily production per well of approximately 12 barrels. Signal Hill's production represented approximately 76 percent of the total 1982 production in the Long Beach Oil Field (3,400,000 barrels), with a dollar value approaching 65 million dollars.

Due to title ownership problems, diverse and splintered ownerships, and the size of the oil field, three major oil companies with the largest operating interests in the Long Beach Field, (Shell Oil, Texaco, and Atlantic-Richfield) decided each would take a portion of the field for unitization purposes. Unitization occurs when each oil company and royalty owner having mineral and/or surface interests in an area sign a unit agreement with the interests of other owners in the area to further oil production through development of secondary recovery facilities.

Secondary recovery is a general term used to describe the method of production adopted to replenish the original energy when this natural method of production is no longer sufficient to produce the oil. "Waterflooding," a secondary recovery method, is used in Signal Hill. The waterflooding technique enables heavy oils, otherwise difficult to extract from the earth, to be pumped more quickly and economically from the field. The secondary recovery program is thought to be the most economical and ecologically sound method of continuing oil production in Signal Hill. The program represents the first attempt to control production logically in a field that has otherwise been characterized by a multiplicity of operators, an irregular development pattern, and wasteful land utilization.

Through this unitization effort, it is estimated that an additional 70 million barrels of oil will be produced in Signal Hill. This is in excess of the 30 million barrels that would have been produced under primary production. In addition to significantly increasing the ultimate recovery of oil in Signal Hill, the waterflood project has resulted in more efficient production; many abandonments have occurred and a significant release of surface rights has resulted in favor of orderly development.

As the secondary recovery program proceeds, land will gradually be released for urban development. The presence of extensive oil resources in Signal Hill is an important local land use planning consideration. As shown in Figure 2, approximately

one-third of the city is still vacant, in oil production or being held for oil production. As a result, the City will continue to be faced with problems of planning for competitive land uses. As pressures for development in Signal Hill continue, the City will need to preserve surface access to oil resources while still encouraging development. At the same time, careful planning will be necessary to mitigate impacts resulting from a close interface between urban development and oil production.

5. Development Suitability

Development suitability describes the degree of safety with which land can support urban structures. Principal determinants of development suitability include: (1) ultimate use, (2) slope, (3) soil composition, (4) significant landforms, (5) view potential and (6) mineral resources. Slope, soil composition and landforms are the most critical of all of the suitability criteria, since they can severely restrict or completely eliminate the possibility of urban development, depending upon their severity. The last two criteria are, in fact, matters of policy and are not physically restrictive to development.

Slopes over 20 percent are not generally considered suitable for urban development. In addition, highly expansive or compressible soils and land with significant rock outcroppings or other landforms are not suitable for development. Moreover, Signal Hill has significant view potential that can only be protected through the careful placement of structures. Lastly, the City has unique oil resources that may constitute a precedent for properties to be developed with oil-related facilities, rather than other urban development types. Development suitability in Signal Hill, then, considers both physical development restrictions and policy direction.

D. Biological Resources

The City of Signal Hill is located approximately 2.5 miles from Long Beach Harbor. The topography of the area provides the City with a direct coastal influence, producing an environment of mild temperatures and moderate humidity. The favorable climate historically support a diverse flora and fauna.

1. Plant Life

Prior to development of the area, the dominant plant community was coastal sage scrub. This is a low, open shrub and subshrub plant community typically found on slopes subject to coastal influences. Remnants of coastal sage scrub can be found in the brushy, open areas adjacent to existing oil wells within the city limits. Typical coastal sage species, all of which are relatively uncommon in the area, include California sage brush (Artemisia californica), Spanish bayonet (Yucca whipplei), laurel sumac (Malosma laurina), slender tarweed (Hemizonia ramosissima) and prickly pear (Opuntia sp.).

The coastal sage scrub community of Signal Hill has been largely converted through brush-clearing to a ruderal community. Ruderals are plant species that have the ability to rapidly colonize disturbed areas where such environmental extremes as very loose substrates or compacted soils, high temperatures, intense light and low moisture predominate. They are usually rapidly growing species that flower and set seed within a short time, when conditions are favorable. Ruderals may be native plants (many wildflowers are ruderals) or, more commonly, introduced weedy species. Ruderal species in the Signal Hill area include common, nonnative weedy species, such as Russian Thistle (Salsola iberica), broad-lobed filaree (Erodium botrys), common wild oat (Avena fatua), short-podded mustard (Brassica geniculata) and bur-clover (Medicago polymorpha).

In addition, a number of ornamental species have been planted throughout the City. Common species utilized include juniper (Juniperus sp.), eucalyptus (Eucalyptus sp.), Peruvian pepper trees (Schinus molle) and various species of palms.

No species of plant currently designated rare, threatened or endangered by the U.S. Fish and Wildlife Service, California Department of Fish and Game or California Native Plant Society has been located or is expected to occur within the City.

2. Wildlife

Due to the degraded nature of the available habitat within the City of Signal Hill, most animals are expected to be common, widespread and highly adaptable species. The Pacific slender salamander (Batrachoseps pacificus) is an amphibian expected in

the vicinity of irrigated landscaping. Expected reptiles include the western fence lizard (Sceloporus occidentalis), side-blotched lizard (Uta stansburiana) and southern alligator lizard (Gerrhonotus multicarinatus).

Birds, being highly mobile, are the most numerous vertebrates in the area. Species tolerant of human presence, such as the mourning dove (Zenaida macroura), northern mockingbird (Mimus polyglottus) and house finch (Carpodacus mexicanus) are expected to be common.

Mammals tolerant of human presence and able to utilize a disturbed habitat include the Virginia opossum (Didelphis virginiana), black-tailed jack rabbit (Lepus californicus), desert cottontail (Sylvilagus audubonii), California ground squirrel (Spermophilus beecheyi) and species of rodents commonly considered pests, such as black rat (Rattus rattus), Norway rat (Rattus norvegicus) and house mouse (Mus musculus).

No species of wildlife currently designated rare, threatened or endangered by the U.S. Fish and Wildlife Service or the California Department of Fish and Game has been located or is expected to occur within the City of Signal Hill.

E. Historic Resources

The historical resources in Signal Hill include oil development and historical structures. The remaining oil development in Signal Hill is a present-day reminder of the City's past. It was the discovery of oil in June 1921 that gave the City its financial resources to incorporate and develop to the extent that it has today. Remaining derricks and towers are a living reminder of these past events. The Alamitos #1 Discovery Well, located at the northeast corner of Hill Street and Temple Avenue is designated as a state historical monument. Figure 3, Cultural, Aesthetic and Recreational Resources shows its location.

In addition to the remaining oil activity, Signal Hill has a number of structures with potential historical value that exhibit a variety of architectural styles. In January 1985, Signal Hill commissioned a survey of historic structures in the city.[1] The study

notes that approximately 10 architectural styles can be identified in the city, including Greek Revival, Colonial Revival, Transitional, Craftsman, Cottages/ Bungalows, Spanish Colonial Revival, Period Revival, Neoclassical, Vernacular and Moderne. Sixteen of the most important are shown on Figure 3. An additional 47 buildings were identified as being of secondary importance. Buildings in both categories could, if restored, be potential candidates for the National Register of Historic Places. A total of 309 historically distinctive structures was identified.

The first seven architectural styles identified above are characteristic of residential structures with Neoclassical, Vernacular and Moderne typified in commercial/industrial structures. These structures date back from 1870 for those of Greek Revival style, to 1940 for those of Cottages/Bungalows, Spanish Revival and Period Revival. Most structures have undergone alteration, rehabilitation, and to some extent, modernization. A number of buildings remain primarily in their original state. Preservation of historical resources in Signal Hill can enhance community identity and contribute to the character already established in the city.

F. Cultural, Aesthetic and Recreational Resources

In order to plan logically for the preservation, conservation, and rational utilization of open space, knowledge of the existing open space resources of the community is necessary. The areas of open space uses recognized in the City of Signal Hill are landscaped medians, parks, school playgrounds and special function areas, as described below.

1. Landscaped Street Medians and Parkways

Landscaped medians and parkways, although they cannot provide usable open space for community residents, can significantly enhance the aesthetic appearance of highways and major roadways and, at the same time, improve the flow of traffic. Landscaping also helps to increase community identity and can distinguish Signal Hill from the surrounding area. Identification monuments, entrance fountains, distictive street trees and unique landscape treatment can all be included in medians and parkways to achieve distinctive community character and aesthetic quality improvements.

Willow Street is currently the only roadway in Signal Hill that is developed with a landscaped center median. The median extends from the western to eastern City boundary and is landscaped with river rock, liquid amber and palm trees.

Parkway plantings and street trees are provided as part of the City's continuing street improvement program. In addition, landscaping is required as part of the City's development review and permit process.

Criteria that may be utilized in determining potential future landscaped roadways (or portions thereof) include:

- Roadway significance in relation to general circulation pattern, as determined by roadway width, traffic volume, general plan designation or combination thereof.

- Proximity to major features; e.g., major commercial concentrations, unique landforms, view potential.

Under these criteria, other potential roadways for landscape consideration might include Cherry Avenue (south of I-405), Orange Avenue and Spring Street. Where right-of-way is not sufficient for full median and parkway landscaping, more compact design solutions might be possible.

2. City Parks and Recreational Facilities

The City of Signal Hill enjoys a somewhat unique position among Southern California communities in that it remains relatively undeveloped as compared with adjacent areas, and it is completely surrounded by the fully developed City of Long Beach. In view of Signal Hill's relative location, recreational opportunities in nearby Long Beach cannot be ignored when determining needs for the City.

Many parks and other facilities in the City of Long Beach are closer and more convenient to Signal Hill residents than to other areas of Long Beach. It is anticipated that Long Beach parks and school playgrounds within one-half mile of the Signal Hill City limits may be used frequently by this community's residents. These facilities should, therefore, be included in planning for the recreation needs of the

City. In a similar manner, residents of Long Beach may be expected to utilize park facilities in Signal Hill, and these should also be considered as part of the recreational opportunities available to that City's residents.

The residents of Signal Hill will, of course, go beyond the immediate area in search of recreation. Excellent regional park facilities exist in the City of Long Beach, and Pacific Coast beaches are less than 20 blocks to the south of Signal Hill's southern boundary. At somewhat farther distances, a much wider range of recreational opportunities is also available.

As noted elsewhere in this plan, some of the land in the Hill area is very steeply sloping and subject to erosion; it may require extensive alteration in order to be utilized for urban development. Such areas are frequently better suited to open space and recreational uses. The City should, therefore, seek to protect actual or potential erosion areas on the Hill through the direct designation of permanent open spaces or through the utilization of strict development controls in these areas.

The City of Signal Hill has approximately 15 acres of developed and undeveloped park lands, as shown in Table 3 and Figure 3. Hinshaw Park, located at Cherry Avenue and 21st Street, is 10.07 acres, including City Hall and other public buildings. The active recreation facilities at Hinshaw Park include a softball diamond, a tot lot and a half basketball court. A fitness trail will also soon be installed. North End Park is located between Wardlow and 33rd Street and Brayton and Gundry. The park is approximately 2.78 acres and is at the same location as a water reservoir and related facilities, which total about 1.4 acres. North End Park provides for passive recreation (e.g., picnicking, relaxation) and has no facilities for active recreation. Wall Street Park, currently undeveloped, is located at Wall Street and Temple Avenue and encompasses approximately 0.54 acres. Legion Park, located at Hill Street and Legion Drive is 1.16 acres and is not fully developed. Approximately 0.35 acres of the site is used for a city parking lot and Chamber of Commerce headquarters.

TABLE 3

PARKS INVENTORY

Name	Location	Acreage	Existing Facilities	Planned Facilities
Hinshaw Park	Cherry Avenue at 21st Street	10.07	Softball diamond, tot lot, half basketball court, City Hall, public buildings	Fitness trail
North End Park	Between Wardlow and 33rd, Brayton and Gundry	2.78	Water reservoir and related facilities, picnicking and passive recreation	
Wall Street Park	Wall Street and Temple Avenue	0.54		
Legion Park	Hill Street at Legion Drive	1.16	Parking lot, Chamber of Commerce HQ (partly developed)	
TOTAL		**14.55**		

In addition to the existing parks described above, Signal Hill is in the process of considering possible additional recreational facilities. A 1.4-acre site located at Dawson Avenue and Panorama Drive is being reviewed as a possible passive recreational site (e.g., picnicking, enjoying the view). Linear view areas within the public right-of-way will also be created along Panorama Drive.

The existing Signal Hill General Plan requires the provision of 4 acres designated as park or recreation space per 1,000 city population. Such acreage is to include both passive recreational areas/open spaces and active recreational park facilities. With a 1983 population of 6,973 persons, the City standard reveals a need for 27.8 acres of parkland, an increase of 13.3 acres. By the year 2000, this requirement will increase to approximately 40 acres, based on the City's projected population of 10,070.

Within one-half mile of the Signal Hill City limits are six sites designated and developed for recreational uses in the City of Long Beach. The largest of these

recreation areas is Chittick Field, an 18-acre facility owned by the Los Angeles County Flood Control District and leased by the City of Long Beach. The other facilities are five Long Beach City parks. The City of Signal Hill does not control the development or utilization of any of these park facilities; however, because of their close proximity to the City and their availability to Signal Hill residents, they have been, and will continue to be, important recreational resources for the community. This should be considered when recognizing the city's parkland deficiencies. School playgrounds discussed below, can also be utilized by residents through mutual agreements with the school district.

3. School Playgrounds

Two public schools are located in Signal Hill and are under the jurisdiction of the Long Beach Unified School District. Signal Hill Elementary School has 7.39 acres available for recreational use during school hours. Burroughs Elementary School has 8.55 acres for recreational activity. The recreational facilities at both schools are also available for limited supervised public use only after school hours.

In addition to these schools, five other Long Beach public schools are within a short walking distance of Signal Hill. Altogether, they provide a total of approximately 18.82 acres of recreational open space land and playground facilities. They are located south and west of the City. Each has over 2.5 acres of available open space after school hours and each can be expected to continue to provide essential recreational facilities to area residents for the foreseeable future.

Long Beach City College, southwest of Signal Hill, also provides open space. It is adjacent to Chittick Field and together, these two facilities provide nearly 30 acres of open space that can be utilized by Long Beach and Signal Hill residents alike.
A summary of recreational facilities available at the schools is given in Table 4.

TABLE 4

SCHOOLGROUND RECREATIONAL ACREAGE

Schools in Signal Hill	Recreational Acreage	Recreational Facilities
Signal Hill Elementary	7.39	Playground and Grass
Burroughs Elementary	8.55	Playground and Grass
Schools 1/2 mile from City of Long Beach/Signal Hill Boundary		
Lee Elementary	2.87	Playground
Whittier Elementary	5.28	Playground
Burnett Elementary	2.69	Playground
College Intermediate	3.24	Playground and Grass
Nightingale	4.74	Playground and Grass
Other		
Long Beach City College	11.70	Gymnasium, Soccer Field, Tennis Courts
Chittick Field	18.28	Baseball Diamonds
Total	**64.74**	

4. Special Function Open Space and Recreational Areas

Landscaped buffers provided between incompatible land uses, and along City or property boundaries, can also provide visual relief and aesthetic character to the Signal Hill community. For example, a portion of the San Diego Freeway passes through Signal Hill. The freeway is depressed as it passes through the city and is landscaped on either side. Although the open space is not usable for recreational purposes, the landscaping along the freeway helps buffer adjacent uses from the dust generated by freeway traffic. At the same time, it provides aesthetically attractive views for freeway motorists.

In addition, unique surface geology offers the potential for permanent open space uses. The Signal Hill uplift is a portion of the Inglewood-Newport fault system. This system is seismically active and numerous earthquakes have been recorded along its trend. The on-shore fault surfaces show topographic expression above ground in the City and elsewhere along the system.

Although preservation of open space is often used to minimize development in geologically hazardous areas, movements along the basement surfaces will not necessarily generate an equivalent movement on the ground. Therefore, open space planning that is used as a device for limiting development in areas subject to geologic hazard must be tempered by the realization that there is no assurance that seismic damage will be more severe along the surface expression of the fault system than anywhere else in the City. In the event of a strong earthquake not located in the immediate vicinity, the Signal Hill uplift might, in fact, represent a fairly stable location, as the uplift represents a relatively steady building area with respect to surface soils.

Nonetheless, structures located along the fault system might be in danger if movement occurs in the immediate vicinity. Open space designations on such hazard areas can minimize risk associated with earthquake activity in the immediate area, while providing such lands for recreational use and aesthetic value. Future development proposals should, therefore, be reviewed carefully with respect to seismic hazard toward the end that rational use be made of areas in the immediate vicinity of the fault zone. The Safety Element provides further information, maps and development recommendations with respect to seismic hazards in the community.

G. Other Open Space Resources

Signal Hill has other open space resources, including undeveloped land, privately owned open space, open spaces adjacent to the City and recreational travel resources, as described below.

1. Privately Owned Land and Vacant Lands

Undeveloped Land: Over 30% of the land in Signal Hill, or 416 acres, is presently vacant or being used for surface oil production. The location and extent of such lands is shown graphically in Figure 2. Approximately 45 percent of this undeveloped land has been zoned for residential uses, whereas 31 percent has been zoned for commercial use and 26 percent has been designated for industrial uses. As the City continues to develop, open space areas are required to provide visual relief from urban development and recreational facilities for future residents of the City. These

portions of land currently undeveloped offer perhaps the greatest potential for future open space and recreational opportunities in the City.

Military Academy: The Southern California Military Academy is located at the southwest corner of Cherry Street and 21st Street and contains 6.26 acres. The Academy, which provides 2.06 acres of open space, is expected to continue at its present location. While the school is privately owned, the Academy has made its recreational facilities available during summer months to the City recreation program. The conservation of this open space is necessary so that visual relief from urbanization within the City can be maintained.

Signal Petroleum Company: The Signal Petroleum Company has recently purchased land along Cherry Avenue, south of Burnett Street, from the Shell Oil Company. The Shell Oil Company, in cooperation with the City, maintained a landscaped open space area along a portion of Cherry Avenue to provide visual relief and an attractive open appearance for motorists. The greenbelt, which consists of 4.40 acres, provides a buffer for adjacent residential development from traffic noise generated on Cherry Avenue. Because of slope conditions, some portion can be expected to continue to provide visual relief along Cherry Avenue.

Sunnyside Cemetery: The Sunnyside Cemetery is located at the northeast corner of California Avenue and Willow Street and constitutes approximately 13.92 acres. It is a privately owned facility located adjacent to Signal Hill, within the City of Long Beach. The City of Long Beach has designated the site as a permanent open use area.

Long Beach Cemetery: The Long Beach Cemetery encompasses approximately 4.41 acres, and it is located adjacent to the Sunnyside Cemetery. The cemetery is located in, and owned and operated by, the City of Long Beach. Similar to Sunnyside Cemetery, it is designated as a permanent open use area.

Long Beach Airport: The Long Beach Airport is located directly northeast of the City of Signal Hill in the City of Long Beach. The airport encompasses approximately 1,133 acres and provides a major open space area. The facility provides visual and spatial relief from the urbanization that surrounds it. In addition, the airport supplies recreational flying opportunities to the public. The airport

operations produce noise and air pollution that negatively affect the environment. The facility is expected to continue in existence and is designated as an open space area in the Long Beach Open Space Element.

2. Public Rights-of-Way and Other Open Space

Bicycle Pathways: The principal discussion of bicycle pathways appears in the Circulation Element. There are significant issues regarding locations, grades, traffic conflicts and origins and destinations of bike riders that need to be resolved through detailed analysis and planning.

Existing City policy includes bicycle pathways as part of the Town Center and Hilltop Specific Plans and a route traversing the city from the intersection of Walnut and the Pacific Electric right-of-way northeasterly to the Temple Avenue interchange with the San Diego Freeway. In addition, the City of Long Beach has proposed several bicycle pathways that would cross Signal Hill: one at Willow Street, and the other along California Avenue. A coordinated and focused effort will be required to reexamine future City policy on this matter.

Scenic Routes: Signal Hill has designated a roadway, which surrounds the Hill area, as a scenic route. The roadway includes Panorama Drive, 23rd Street, 21st Street and portions of Temple Avenue (See Figure 3). This route uses the existing street system and provides a link between the Civic Center/Hinshaw Park and the State Historical Monument, which is located on the east side of the Hill at Temple and Hill streets. The entire route provides attractive views of urban Southern California from the Hill.

H. Alternative Energy Resources

The use of solar energy for heating and cooling has increased rapidly throughout California due to rising energy costs. Some residents of Signal Hill have taken advantage of this alternative form of energy; however, they represent only a small percentage of the city's total population. The City has good solar access and has the potential to increase solar energy utilization in the future. In addition, the City's undeveloped land (approximately 350 acres) has very good potential for applying solar designs and technologies, including "passive solar" techniques, where collected heat

moves by the natural forces of convection, conduction and radiation, or "active solar," which involves the use of pumps and fans to transport heat. The solar energy potential of residential neighborhoods in Signal Hill is given in Figure 4. Industrial and commercial areas, though not addressed in Figure 4, have potential to use solar energy for space and water heating. Criteria used in determining solar potential include topography, development density and vegetation as described below.

Type 1 Solar Potential: These areas are designated as low-density residential on the General Plan, and large portions are undeveloped. Due to the undeveloped nature of these districts, there is good potential to incorporate solar access into future development designs, or through retrofit of existing development.

Type 2 Solar Potential: This area, designated medium-density residential, is currently being developed and has excellent year-round solar access. When this area is developed further, consideration of solar access in structural designs need to be implemented for continued solar access.

Type 3 Solar Potential: Much of the land in this area is indicated low-density residential and portions are currently being developed. Solar access is good for individual retrofit collectors on rooftops. In addition, this area has excellent potential for passive space heating designs and solar collectors due to the existing long lots.

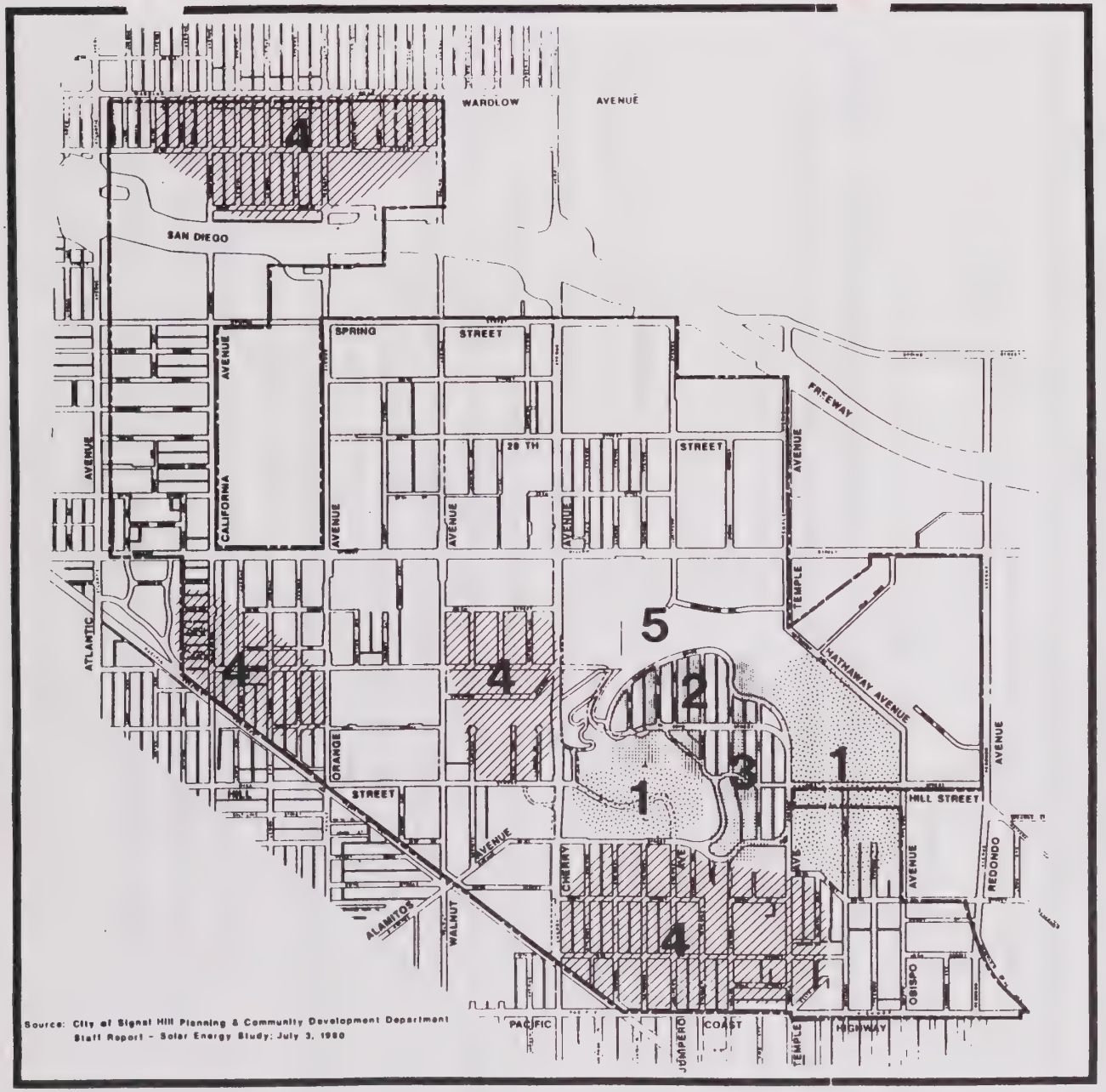
Type 4 Solar Potential: Land use in these neighborhoods consist of low/medium-density and high-density residential designations. Most of the land is developed and these areas are generally poor sites for passive solar systems due to the narrow lots and limited space between structures. However, these sites can take advantage of solar access with roof-mounted retrofit collectors.

Type 5 Solar Potential: Currently, this area is undeveloped. This area contains slopes of more than 15 percent, causing solar access to be poor. A major potential problem for solar systems in this area is long shadows that would shade the sun's incoming rays.[1]

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1 The description of solar energy and potential use in Signal Hill was derived from the City of Signal Hill Staff Report, dated July 3, 1980.

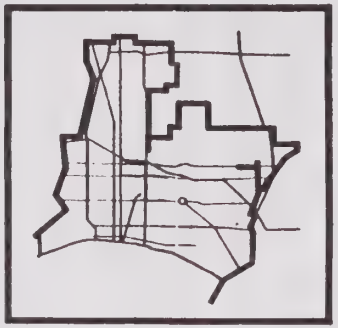
SOLAR POTENTIAL



Source: City of Signal Hill Planning & Community Development Department Staff Report - Solar Energy Study; July 3, 1980

LEGEND

1. **Type 1 Solar Potential:** designated low-density residential; largely undeveloped area; future and retrofit solar potential is high.
2. **Type 2 Solar Potential:** designated medium-density residential; currently being developed; excellent year round solar access.
3. **Type 3 Solar Potential:** area is low-density residential; portions currently under development; solar retrofit potential is good.
4. **Type 4 Solar Potential:** mixed density residential designations; most land developed; generally limited to poor solar potential.
5. **Type 5 Solar Potential:** designated as town center; undeveloped; poor solar access.





City of Signal Hill

FIGURE 4

ENV. REV.

III. NEEDS, ISSUES AND CONSTRAINTS

A. Introduction

Section II of this element describes existing conditions related to air quality, water and land resources, biologic environment, open space and recreation and the historical resources of Signal Hill. To provide a policy guide for the future, these existing conditions must be compared with community needs. In this section, needs are identified through a combined effort of the City and the public.

Once needs and issues are identified, the City must examine constraints to meeting those needs. Sometimes constraints are physical, such as slope or existing structures, and sometimes they are policy-oriented, such as means of financing, or priority relative to other development. The needs, issues and constraints for Signal Hill related to environmental resources are discussed below.

B. Needs and Issues

The following needs and issues have been identified through an analysis of existing conditions, and by the public at workshops held in December 1984 and August 1985.

- **Improve Air Quality**

  State and federal air quality standards are exceeded infrequently in Signal Hill. The city's unique topography makes views important. Therefore, visual clarity is an important consideration in planning. Additionally, dust and particulate matter resulting from industrial and construction activity is a subject of continued monitoring. Moreover, regional air quality that is not static and that is subject to changes with the regional economy and development patterns is the responsibility of other agencies.

- **Protect Water Quality and Conserve Water Supply**

  Water quality in Signal Hill is high, both for imported water and for that pumped directly from the underground basin. A major responsibility of the City is to reduce and/or eliminate contamination of the groundwater

supply. Responsibility for quality and supply is with others, as well; advocacy and collaboration will be required.

- **Preserve and Enhance Unique Natural Features and Protect Public Health and Safety**

The Hill provides Signal Hill with its most important identifying feature. Significant potential exists to enhance the City's living environment and overall image through creative and sensitive treatment of this major topographic feature. There are also additional opportunities for views noted on the Cultural, Aesthetics and Recreational Resources Map (Figure 3). Notably, views of the Hill are as important as views from the Hill. These same natural features can be used to protect the public health and safety in areas of severe slope, poor soil conditions or geologic hazard.

- **Manage the Development and Production of Petroleum Resources**

There are two issues related to the development and production of petroleum resources. One issue involves balancing the need to extract these valuable mineral resources in a way that minimizes hazards, softens the impact of production activities on surrounding properties, and does not inhibit economic development of other sectors of the City. A second issue involves the transition from resource production to urban uses, which is treated as well in the Land Use Element.

- **Protect and Enhance Historic and Architectural Resources**

Signal Hill has a wide range of architecturally significant buildings. As many as 63 of these potentially could qualify for inclusion on the National Register of Historic Places, if properly registered and/or restored. A significant historic resource is the first oil well in the city, Alamitos Discovery Well, a State Historic Landmark. These could be the foundation for a renewed interest in the City's history.

- **Provide Open Space and Landscaped Improvements for Visual Relief**

  As a component in the aesthetic appearance of Signal Hill, the visual presentation along the City's highways is basic. The City's first median landscaping project on Willow Street sets the tone for developing an overall system that is integrated with other public facilities, parks, parkways and other possible highway improvements.

  Unbuildable slopes and land that is left open because of geological/seismic considerations should also be integrated, whenever possible, into the overall system. This private element of the greenbelt system would be designed to relate visually to public facilities while taking care to respect the private nature of that space.

- **Provide for Adequate Outdoor Recreation Areas**

  To meet current and future city standards for recreation additional land should be made available. In addition, currently undeveloped parkland should be improved. Significant recreational resources exist in and adjacent to Signal Hill; coordination of these facilities will create an overall system available to all residents.

- **Promote Conservation of Energy and Use of Alternative Energy Resources**

  Signal Hill residents have opportunities to benefit from the Southern California climate by exploiting solar energy. Although the utility and potential of this resource is not typically available to the average homeowner, there is a clear need to encourage the use of this energy source.

C. Constraints

As part of the planning process, the identification of barriers or constraints to city action is necessary. This is not so much a listing of what is impossible, but a challenge to think creatively about how to surmount the barrier. There are always constraints that relate to resource availability. Most often, these have to do with

funding; less frequently, they relate to the availability of resources such as expertise and leadership. The following constraints have been identified for the Environmental Resources Element:

- **Regional Problems and Jurisdictional Responsibilities**

  Signal Hill is a relatively small city of just over 7,000 people in a county that has over 7 million people and many regional regulatory agencies. Signal Hill cannot always take direct action to solve certain problems; the city's ability to mitigate the impacts on its residents is limited. For some issues, such as air quality, the SCAQMD is the lead agency. Los Angeles County, because of its size, and geographic importance, has prepared its own policy statement. To some extent, water quality is a similar regional problem.

- **Limitations and Costs of Known Technology**

  This constraint is a scientific and engineering one, and like the jurisdictional question, is not unique to Signal Hill. Given, for instance, the Southern Californian's dependence on the automobile, and current technology available to curtail automotive emissions, elimination of air pollution resulting from this source is unlikely in the forseeable future. Similarly, methodologies for recovering, storing, and transporting petroleum resources have a cost/technology relationship that can act as a constraint. Although this type of constraint is one that Signal Hill can do little about, some actions are available to the City. These include keeping current with technologies and costs in key areas of concern, such as petroleum resource recovery and designing development standards to recognize technological advances and limitations, among other actions.

- **Rights Attendant on Private Ownership of Property**

  This constraint on government is a fundamental one. It most often comes into focus in areas of property maintenance, use and reuse of historic and architecturally significant buildings, and in development standards applied to new construction. With respect to environmental resources in Signal

Hill, it comes into play in the rights to develop property that might be needed to achieve open space goals, in recovering petroleum resources that might cause environmental degradation, or in proposed use or remodeling of architecturally significant structures. The solution lies in the City's ability to set guidelines that can optimize competing goals.

- **Fiscal Limitations**

Although not unique to environmental and open space resource conservation, fiscal constraints exist at every level of government. Signal Hill is no exception. Land acquisition for parks and open space purposes, development of recreation facilities, landscaping of medians and parkways and similar expenditures must compete for limited City dollars. To the extent possible, reliable alternate funding sources should be developed.

- **Level of Public Knowledge and Information**

On many issues, the public is poorly informed. This lack of information often translates into lack of support for worthwhile proposals and programs. This may be the case, for instance, with energy and water conservation: a short-term experience with "plenty" sets the tone for response to conservation programs. All government programs should include public education components that clearly state the known facts and presumptions upon which action to the public is recommended.

IV. GOALS AND POLICIES

Signal Hill's environmental resources, goals and policies have been developed to respond to community needs and recognize constraints as discussed in the preceding section of this element. Goals are defined as desirable long-range conditions that the city will strive to reach. Policies are statements of direction for the City to achieve those goals. Together, they provide the city with a guiding framework to define implementation strategies.

GOAL 1

Maintain and enhance the identity and aesthetic quality of Signal Hill as a City with striking view potential, and a City that is carefully managing its transition from resource extraction to balanced land uses.

POLICY 1.1

Protect views both to and from the Hill and other scenic features. This will extend to all new development, and to major rebuilding and additions.

POLICY 1.2

Design a greenbelt system that includes landscaped entranceways to the city, and landscaped medians and parkways on City streets. The greenbelt system should be linked to the civic center as a community focal point, the City's park system, bicycle and pedestrian trail system, active and passive open space, with consideration given to developing guidelines to integrate the system with private open space.

POLICY 1.3

Develop design guidelines and themes that can be utilized throughout the City, and that are integrated with the greenbelt system, public signage, street furniture, public buildings, and similar facilities.

POLICY 1.4

Protect and enhance the natural topography that exists in the City.

GOAL 2

Maintain and enhance the City's unique cultural, aesthetic and historic areas.

POLICY 2.1

Protect and enhance the State Historical Landmark at the Alamitos Well Site #1.

POLICY 2.2

Protect and enhance architectural resources in the City consistent with their significance and importance. Develop ways of encouraging these resources to remain intact as the City grows and develops.

GOAL 3

Provide and maintain a variety of parks and recreational facilities, both passive and active, that will be conveniently located througout the community.

POLICY 3.1

Provide parkland and recreational facilities in neighborhoods of the City currently not served with such facilities.

POLICY 3.2

Ensure accessibility of local and regional parklands of all types to all users, including the young, the elderly and the handicapped.

POLICY 3.3

Provide (within economic capabilities) as full a range of activities as possible, including active and passive recreation, biking, walking, jogging, picnicing and "viewing."

POLICY 3.4

Coordinate with the Long Beach Unified School District to ensure the availability of school recreational facilities for public recreation after school hours.

POLICY 3.5

Coordinate with the Long Beach Parks and Recreation Department on park and recreation planning to ensure that all users of these facilities in both cities are well served.

GOAL 4

Manage the production of economically valuable resources in the city to achieve a balance between current market forces and long-term community values.

POLICY 4.1

Improve the interface between oil production activities and urban development, both for existing and new projects.

POLICY 4.2

Encourage the development and production of natural resources that are demanded by the market, and that release land for urban uses at a reasonable and controlled rate.

POLICY 4.3

Require the restoration and reuse of land no longer necessary or economical for oil-production activities.

POLICY 4.4

Minimize and eliminate where feasible the adverse environmental impact of resource-production activities. Also provide adequate setback and open space where oil-production activities continue adjacent to urban development.

GOAL 5

Ensure minimal degradation to the physical environment from development or operational activities, and require restoration of the environment where degradation has occurred.

POLICY 5.1

Cooperate and participate in regional air quality management plans, programs and enforcement measures.

POLICY 5.2

Protect water quality and conserve water supplies through reducing and eliminating contamination from industrial operations or resource development activities. Cooperate and participate in regional water quality and water supply plans, programs and implementation measures.

POLICY 5.3

Eliminate the unsafe storage, use and transport of hazardous industrial and commercial chemicals and substances through regulation, planning and development review processes.

POLICY 5.4

Reduce and eventually eliminate current environmental degradation in all areas of the city. Require restoration of the environment in these areas where it is subsequently degraded.

GOAL 6

Ensure and protect the public safety in natural hazard areas.

POLICY 6.1

Regulate development to protect the public health, safety and general welfare where studies indicate hazards due to earthquake faults, unstable soils or steep slopes. Where needed, maintain such lands in public or private open space uses. Restrict the proximity of buildings to existing oil production uses or petroleum storage facilities that present a high risk of explosion or fire.

GOAL 7

Maintain and provide information to the community on environmental problems, opportunities, progress and issues.

POLICY 7.1

Disseminate information about the values of alternative energy technology, including use of solar energy in Signal Hill.

POLICY 7.2

Develop a public information program in conjunction with the oil production industry to explain programs and progress toward improving the resource production/urban development interface.

POLICY 7.3

Provide information to the general public on environmental conditions and issues in Signal Hill.

V. IMPLEMENTATION - STRATEGY AND PROGRAM

The following programs are action statements to implement the framework established in the goals and policies. Programs, generally, are the most definitive means for accomplishing community needs since they are, where possible, quantitative guides for the management of environmental resources in the City.

	Implementation Program	Corresponding Policy
1.	Review and revise the current zoning ordinance to provide protection to areas of greatest view sensitivity, and to encourage preservation of the natural terrain through mechanisms such as reducing residential densities as recommended in the Land Use Element.	1.1, 1.4
2.	Through the City's site plan and development review procedures, continue to evaluate individual projects to ensure protection of views and preservation of the natural topography wherever possible.	1.1, 1.4
3.	In preparing capital improvement plans, the City will explicitly consider view protection and protection of natural resources.	1.1, 1.4
4.	Prepare a comprehensive greenbelt plan. The plan will include landscape architectural designs for entranceways to the City, plant lists and landscape designs for medians and parkways, standards for landscaping requirements on private properties that front arterial highways or other significant public properties, and precise implementation measures. The plan will link public open space, private open space, historical and cultural resources.	1.2
5.	Prepare overall design guidelines for the City specifying design, size, materials, colors, and similar elements that can be integrated with a greenbelt system, public signage, street furniture, public buildings and private improvements.	1.3
6.	Explore mechanisms and available programs to protect and enhance the State Historical Landmark at the Alamitos Well Site #1. Cooperation of the State Historic Landmarks Commission and the oil industry will be sought. An effort will be made to develop a passive park to complement the site.	2.1

	Implementation Program	Corresponding Policy
7.	As funding is available, continue to expand upon the Historic Resources Study. Additional information about structures which might be collected includes oral histories of use and ownership, pictorial history of significant design and construction details, condition of structure and details of additions, craftsmen involved, important owners and/or residents and similar items.	2.2
8.	Examine all "A" rated structures in the city's Historic Resources Study and review possible zoning mechanisms and funding sources to encourage the preservation and enhancement of these structures.	2.2
9.	Continue to require dedication of park lands or in-lieu fees or a combination of both, from developers of new residential subdivisions and planned developments. Revenue received from these fees should be used for park acquisition and/or development within the area of the particular development they were collected from.	3.1
10.	In acquiring and developing park lands, top priority should be given to Planning Areas 7 and 4.	3.1
11.	Develop a program to remove architectural and other physical barriers to the use of City parks that reduce accessibility by the young, the elderly and the handicapped.	3.2
12.	Prepare an open space zoning ordinance that designates public park lands and facilities as open space.	3.2
13.	The City will seek to minimize City costs of acquiring and managing recreational and open space through techniques which may include easement acquisition, donations, etc.	3.1, 3.2, 3.3
14.	As part of the annual budget process, including the review of public works as required by section 65401 of the State Planning Law, ensure that recreation opportunities are included as financial resources are available. Recommendations should consider the need for both active and passive recreation opportunities.	3.1, 3.2, 3.3
15.	Develop a comprehensive plan for bicycle trails and pedestrian pathways in the City. This plan will connect major focal points in the City, including but not limited to the Hilltop, the Town Center and the Civic Center. The plan will explore the possibility of linking facilities outside of the city with those in the City, the usefulness of the Pacific Electric right-of-way, and linking City trails with those shown on the Long Beach General Plan.	3.3

	Implementation Program	Corresponding Policy
16.	Where feasible, and where consistent with adopted specific plans, the general plan and the zoning ordinance, the City will encourage facilities that capitalize on view potentials. Public facilities will include view parks, view points along bike trails and pedestrian pathways and roadside view points along scenic highways. Private view opportunities could include restaurants (as exemplified by the Hilltop specific plan) and other uses where numbers of people might congregate.	1.1, 3.3
17.	The City will work toward establishing with the Long Beach Unified School District a written agreement for the recreational use of school facilities after hours.	3.4
18.	The City will discuss with the City of Long Beach a possible mutual agreement for the purpose of ensuring the use and availability of recreational resources in Long Beach for Signal Hill residents.	3.5
19.	The City will review all regulatory ordinances to define areas where the interface between oil production and urban uses is involved. Amendments will be proposed to improve the quality of this interface and minimize undesirable impacts.	4.1
20.	Where hazardous or recurrent nuisance conditions exist, the city will work with property owners and occupants to resolve issues and mitigate impacts. This will include: (a) a survey and definition of such conditions, based on a field survey and a review of complaint and incident records, and (b) a review of relevant municipal code procedures and enforcement practices to determine desirable changes.	4.1
21.	Maintain communication with oil extraction interests in the City regarding market trends and projections for continued pumping from Signal Hill oil fields. As trends and projections are refined, review City plans and policies for continued appropriateness, and amend plans, policies and implementation tools as necessary.	4.2
22.	Periodically review and update operational and drilling standards for oil production. In collaboration with the oil industry, define criteria and standards for the restoration and reuse of land no longer necessary or economical for oil production activities.	4.1, 4.2, 4.3, 4.4, 5.3
23.	Review carefully all zoning, building and discretionary permit applications which interface with oil production activities. As part of the approval and permit process, the City will require or encourage changes in project design, fencing, landscaping, etc., to minimize or eliminate undesirable impacts.	4.4

	Implementation Program	Corresponding Policy
24.	Coordinate with the South Coast Air Quality Management District (SCAQMD), the California Air Resources Board and applicable federal agencies to improve air quality throughout the South Coast Air Basin. Specifically, the City will coordinate with the SCAQMD to implement regional air quality attainment measures applicable to the City of Signal Hill.	5.1
25.	Coordinate with appropriate regional and state agencies to promote the conservation of water and groundwater resources to ensure that continued adequate supplies of water will be available into the future, with the highest water quality available.	5.2
26.	In collaboration with representatives of the oil industry, explore means of expediting cleanup from oil spills, chemical spills and other industrial accidents which may affect the environment. Review current response procedures and explore ways of allocating costs to the responsible parties.	5.2
27.	Cooperate and participate in regional studies and investigations dealing with hazardous waste disposal. Implement programs that are clearly within the City's sphere of responsibility and fiscal ability, as appropriate.	5.2
28.	Review current zoning, building, safety and other codes regulating storage, use and transport of hazardous chemicals on a regular basis, to ensure that they are responsive to technology in use, and available means of risk management. Amendments will be recommended as appropriate.	5.3
29.	Through implementation of the Sanitary and Industrial Waste Ordinance, identify and abate hazards and nuisances resulting in unacceptable risk of contamination or personal safety.	5.3
30.	During the permit and development review process, the presence or likelihood of hazardous chemicals and substances will be identified. If such do exist in any situation, permits will not be issued until adopted City ordinances standards and regulations have been complied with.	4.4, 5.3
31.	As a condition of permit issuance, the City will require that property be cleaned of rubble, remnants of abandoned structures, and environmentally degraded portions of the site as required by existing City ordinances standards and regulations.	5.4

	Implementation Program	Corresponding Policy
32.	Implement applicable code enforcement procedures requiring remedial measures where the environment is substantially degraded, and there is a public health or safety threat. Where the degradation is not hazardous, but visual or of a nuisance character, utilize nuisance provisions in the municipal code to obtain corrections.	5.4
33.	Existing codes and ordinances will be reviewed and revised as necessary to restrict building in areas of unstable or steep slopes.	6.1
34.	The City will require that new developments respect natural landforms and minimize grading. Amendments will be made to appropriate codes and ordinances to encourage contouring, to require stabilization of cut and fill slopes and to require landscaping of slopes,where substantial grading is proposed.	1.4, 6.1
35.	The City, through appropriate codes and ordinances, will provide adequate building setbacks from oil production and petroleum storage facilities with a high risk of explosion and fire.	6.2
36.	The City will prepare a brochure and information program, in conjunction with local energy utility companies, which describes the costs and benefits of solar technology to Signal Hill residents.	7.1
37.	In collaboration with the oil industry and the Chamber of Commerce, develop an educational program describing the interface between oil production and urban uses, and how it is expected to change over time. Material developed as part of this program will be distributed to existing and prospective businesses and residents in Signal Hill.	7.2
38.	Periodically provide City newsletter information covering environmental issues and progress, for delivery to residents and businesses.	7.3

SAFETY ELEMENT
of the
SIGNAL HILL GENERAL PLAN

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* Map is located in Signal Hill Planning Depertment.

I. INTRODUCTION

A. Purpose and Scope

Much of the land within the City of Signal Hill remains undeveloped as a result of intensive oil recovery activities. However, as projected in the Land Use Element, the City's population will increase by the year 2000.[1] The population increase will impact the level of service requirements, particularly for peak-load and emergency levels. Correspondingly, the impact of hazardous areas within the City, and any corresponding risks, compound as population increases.

Early identification of these hazards can minimize the level of public exposure. The purpose of the Safety Element is to create a cohesive guide consisting of specific policy-oriented programs. The policies and programs outlined in this element provide direction and a course of possible future action for the various City departments. To achieve its purpose, the Signal Hill Safety Element accounts for hazardous issues. The City's intention here is to reduce the potential for loss of life, injuries, damage to property, and social and economic dislocation resulting from major hazards throughout the community.

Six general hazard areas are considered in this element: flooding, geologic, fire, crime, oil operations, and hazardous and toxic materials. The interaction of man-made structures with any of these hazard areas may increase the potential for danger. The Safety Element format isolates and evaluates identified hazards individually, specifying policies and programs to mitigate each hazard.

B. Legislative Authorization

The California state legislature has recognized that there are many major threats to safety throughout the state that should be considered by each city in order to better protect its citizens. As a result, seismic safety and safety elements are mandatory. The Signal Hill Safety Element is a combination of the required seismic and safety elements.

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1 City of Signal Hill, Draft Land Use Element of the General Plan, 1986.

Specifically, California Code Section 65302 requires the identification and appraisal of seismic hazards as follows:

> "...susceptibility to surface ruptures from faulting, to ground shaking, to ground failures, or to effects of seismically-induced waves such as tsunamis and seiches.
>
> "...an appraisal of mudslides, landslides, and slope stability as necessary geologic hazards that must be considered simultaneously with other hazards such as possible surface ruptures from faulting, ground shaking, ground failure and seismically-induced waves."[1]

Government Code Section 65302(i) identifies required safety concerns as follows:

> "...fires and geologic hazards including features necessary for such protection as evacuation routes, peak load water supply requirements, minimum road widths, clearances around structures, and geologic hazard mapping in areas of known geologic hazards."

C. Justification for Combining Public Safety and Seismic Safety Elements

As can be seen from the California Government Code, the requirements for both the Seismic Safety Element and the Safety Element overlap considerably, particularly with regard to geologic hazards. To complement this overlap and reduce needless duplication, the seismic safety and safety elements have been combined into one safety element.

D. Relationship to Other Elements

The Safety Element provides basic input into most of the other general plan elements and contributes information regarding the comparative risk/safety involved in developing lands of differing characteristics for various purposes and involving many types of structures and occupancy levels. The element relates land uses that may be at risk from certain potential hazards in the community to the availability of effective emergency response services and facilities to combat the possible hazard. It must provide essential and critical input to the land use, circulation, and environmental resources elements.

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1 State of California, General Plan Guidelines, 1980, page 124.

II. BACKGROUND AND EXISTING CONDITIONS

A. Public Safety

1. Floods

The City of Signal Hill, generally, is not subject to flood hazards and there are currently no special flood hazard areas. However, due to its topography, infrequent but intense rainfall presents minimal flooding potential to most areas of the City. The greatest potential for rainfall-related flooding is in localized areas south and southeast of the Hill. Although some flood control facilities are maintained by the City of Signal Hill, the majority are controlled by the Los Angeles County Flood Control District. It is expected that localized problems will continue until new drainage facilities are provided. There is a remote possibility that any one of the three City-operated water reservoirs could also rupture and leak, resulting in localized flood conditions in some areas of the City. The City's three water storage facilities possess a total holding capacity of 5,350,000 gallons. The City's existing reservoirs and capacities are as follows:

Water Storage Facility	Capacity in Gallons
Gundry Reservoir	4,700,000
Hilltop Tanks	50,000
Temple Avenue Tanks	600,000

In addition, a new 5,000,000 gallon reservoir is planned in the future to be constructed on the Hill. Upon completion, it is expected that Hilltop and Temple Avenue tanks will be removed. According to engineering studies, the existing Gundry and proposed Hilltop reservoirs will result in sufficient capacity to meet the ultimate needs of the City.[1]

All reservoir facilities in the City are regularly inspected. In the event of a tank leak or rupture, however, proximate developments could be subject to flooding. If

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1 City of Signal Hill. Draft Environmental Impact Report for Belmont Vista Development (prepared by Jim Hinzdel and Associates, Inc.), February 1985, page IV-49.

developments were immediately downslope of a reservoir site and water were to flow rapidly, damage could be substantial. Fortunately, this situation does not presently exist, and can be avoided by careful site planning and development review.

If a major flood were to occur in the City of Signal Hill due to severe storm conditions, responsibility would be shared among three agencies, according to storm frequency and severity. The agencies are the City of Signal Hill, Los Angeles County Flood Control District and the U.S. Army Corps of Engineers. For a more complete discussion of flood control and drainage, see the Circulation and Infrastructure Element, Section II. B.

2. Fire

Within the City of Signal Hill exist several fire hazard areas of potential danger to the safety of the community: open land, urban structures, and industry. Approximately 30 percent of the City's land area remains undeveloped except for oil wells. These areas are generally grass-covered and may pose some fire danger when dry. Due to good access for fire-fighting equipment, this danger is minimized. The petroleum industry represents the most obvious fire hazard with refineries and storage tanks located in the City. Annual per capita fire losses from 1980-1984 are shown in Table 1.

TABLE 1

FIRE DEPARTMENT RESPONSE INCIDENTS —1980-1984[1]

	Fires and Miscellaneous Incidents	Paramedic Rescues	Total Incidents	Fire Loss	Per Capita Loss
1980	224	236	460	$112,300	$19.58
1981	179	320	499	38,700	6.59
1982	131	321	452	162,100	23.24
1983	94	337	431	60,000	8.17
1984	123	455	578	107,100	14.58
Average	150	334	484	$96,040	$14.43

1 Los Angeles County Fire Department, Operations Bureau, Division IV, December 1985.

Industrial and Commercial Fire Hazards

Commercial land use encompasses about 7 percent of the total land area (see Land Use Element). Of particular concern in dealing with commercial fires are high-rise, multiple-use buildings. For new construction, the Uniform Building Code provides that special fire preventive measures, such as sprinklers, be employed in buildings with floors for human occupancy more than 75 feet above the lowest level of Fire Department access. In addition, the Los Angeles County Fire Department reviews and approves plans for most new construction projects prior to building permit issuance.

Older buildings are often a greater fire risk than is new construction. One-third of all the commercial property in the City is of pre-1940 construction, since it is spread fairly evenly throughout the City, the fire hazard potential is minimal.

Industrial property within the City accounts for 23 percent of the land area. The greatest number of industrial fires results from the materials used or produced in the manufacture of flammable and combustible products, such as petroleum. Storage of such flammable and combustible materials increases the potential for fire and explosion. Oil refinement and storage represent a major industry in the City, and the numerous oil wells, refining facilities, and storage tank farms are a potential threat to public safety. Close proximity of other industrial, commercial and residential land uses increases the possible danger. At present, there are approximately 600 producing oil wells, storage facilities capable of holding 2,000,000 barrels of flammable liquid ranging from raw crude oil to highly flammable gases and liquids and an estimated 1,000 miles of underground piping used for transference of these liquids and gases. Adjacent to the northeastern City boundary, south of the San Diego Freeway, are the Long Beach Gas Department's natural gas storage tanks with a capacity of 10,000,000 cubic feet.

Refineries and storage facilities typically maintain onsite fire suppression equipment and detailed facility plans should an emergency occur. Nonfloating top (fixed-roof) tanks are equipped with automatic foam units and all storage areas must be properly diked. In the event of a major oil fire, the company employees are to be capable of using the suppression equipment provided by the facility until fire department equipment arrives.

Most existing producing wells pose only a minor to moderate fire hazard. The most likely cause of an oil well fire is from pumps overheating due to mechanical failures. A more remote possibility is a fire started by a carelessly dropped cigarette or match. These facts are supported by the mixed responses by the surveyed communities[1] to potential fire or blowout hazards. Water flood projects in Signal Hill, in particular, have reduced formation pressures. As a result, gas and oil are in a mixture form, with high water content (in some cases approaching 99 percent). Required blowout prevention equipment, along with the high water content, has significantly reduced potential hazards. In fact, the local office of the Division of Oil and Gas could not recall a recent blowout or well fire in Signal Hill.

More serious fire hazards and explosion hazards include the following: crude storage tanks at well sites and in tank farms in the City; refineries and sites where blending of oil products and gasoline occur; and high-pressure lines containing natural gas, gasoline, naptha or other refined products. A crude oil pipeline rarely poses a danger of explosion or fire unless high gravity crude is involved. The greatest potential hazard, however, is represented by large natural gas mains owned by Long Beach Gas Company and Southern California Gas Company. If major ruptures occur and weather conditions are correct, an entire block could be engulfed with natural gas before igniting.

Residential Fire Hazards

Residential fires are usually confined to single buildings, although there is a danger of adjacent structures catching fire. Homes with untreated wood shingle and asphalt shingle roofs, scattered throughout the residential areas of the City, are particularly susceptible.

The City has a number of pre-1940 homes, although owner-upgrading and maintenance have kept the majority in good condition. The fire department is prohibited by legal restrictions from making inspections of single-family homes, except under special circumstances.

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1 See City of Signal Hill, Oil Production Activities.... Pages 20, 30 and Appendix B.

Multiple-family residential structures pose a variety of problems. The large concentration of people increases the possibility of careless and hazardous activity. In addition, structural and design characteristics often make emergency response more difficult and intensify disaster potential. The numerous two- and three-story apartments and condominiums within the City are primarily of modern construction and good condition.

Personnel and Organization

The City of Signal Hill receives fire protection services from the Los Angeles County Consolidated Fire Protection District. The only county fire station for the City was completed in 1973 and is located at the southeast corner of 27th Street and Raymond Avenue. The station is a part of Battalion 7, Division 1, and houses one engine company (No. 154), which has a 1,250 gallon per minute (gpm) pumper. Manning at the station on a 24-hour basis consists of three firemen at all times: a captain, a firefighter specialist and a firefighter, all certified as emergency medical technicians. The estimated response time for any emergency call within City limits is 3 minutes.

Other companies, special equipment, manpower and chief officers from the other 125 stations of the Consolidated Fire Protection Districts of Los Angeles County are also available for service in Signal Hill. For first-alarm fires in Signal Hill, initially, four engine companies (including Station 154), one ladder truck company from Long Beach, a battalion chief, and a paramedic squad from Lakewood will respond. Additional engine and truck companies will respond for second- and third-alarm fires.[1] The station's normal response priority is to respond to calls as they come in. In unusual and disaster situations, the station will respond based on orders from Battalion headquarters.

The Consolidated Fire Protection District of Los Angeles County is part of the statewide Master Mutual Aid System administered through the Office of Emergency Services of the State of California. Los Angeles County is part of Region 1, which includes five other counties, and may rely on needed technicians and equipment from

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1 City of Signal Hill, Draft Environmental Impact Report for Belmont Vista Development, (prepared by Jim Hinzdel and Associates, Inc.) February 1985, page IV-36.

other Regions within the state, once local resources have been exhausted. In addition, the Consolidated Fire Protection District of Los Angeles County also has a specific mutual aid agreement with the City of Long Beach Fire Department.

In addition to fighting fires and responding to medical and safety emergencies, Station 154 is also responsible for conducting fire safety inspections, public fire prevention courses and other community services. Fire safety inspections of commercial businesses are conducted once a year, whereas inspections of heavy industries and oil facilities take place three to four times a year. The fire department is also responsible for carrying out teaching programs designed to educate community members of all ages about fire and safety hazards, fire prevention and proper responses to fires when hazards do occur. Finally, the department keeps the public informed regarding the latest fire prevention news and safety procedures and maintains a communication link between the community and the department. These additional services are a vital component of a successful fire prevention program that can eliminate or reduce danger to public safety and property. [1]

Fire Protection

Insurance Services Offices, Inc. (I.S.O.), provides the basis for grading municipal fire protection systems. This information is used by fire insurance underwriters to determine fire insurance rates within any location.

In determining a city's fire protection rating, the I.S.O. evaluates various factors significant in terms of community safety (see Table 2). The most recent municipal rating of Signal Hill was in 1974; an update is scheduled for 1987. Water supply and structural conditions collected the greatest number of deficiency points. An I.S.O. rating as third or fourth class is the average for small cities in Southern California.

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1 Telephone interview with Aubry Ferris, fire fighting engineer, City of Signal Hill Fire Department, August 1985.

TABLE 2

FIRE RATING SURVEY FOR SIGNAL HILL — 1974[1]

	Relative Values	Points of Deficiency	% of Rel. Value	% of Total Deficiency
Water Supply	1700	591	35%	30%
Fire Department	1500	299	20%	15%
Fire Alarm	550	357	65%	18%
Fire Prevention	350	122	35%	6%
Building Department	200	66	33%	3%
Structural Conditions	700	433	62%	22%
Additional Deficiencies		126		6%
Total Deficiency	5000	1994		100%
Class		4th		

NOTE: THE CLASS OF A MUNICIPALITY IS BASED ON A TOTAL MAXIMUM OF 5,000 POINTS OF DEFICIENCY AS FOLLOWS:

1st Class	0 - 500 Points	
2nd Class	501 - 1000 Points	
3rd Class	1001 - 1500 Points	
4th Class	1501 - 2000 Points	
5th Class	2001 - 2500 Points	
6th Class	2501 - 3000 Points	
7th Class	3001 - 3500 Points	
8th Class	3501 - 4000 Points	
9th Class	4001 - 4500 Points	(or a water supply rating of 1700 or fire department rating of 1500 deficiency points)
10th Class	Over 4500 Points	(or no water supply or no fire protection)

1 Insurance Services Office, Municipal Survey, June 1974

Signal Hill fire flow requirements are shown in Table 3, although certain areas of the City may require fire flow in excess of those designated. Large industrial or commercial developments' fire flow must be considered relative to the project size. For emergencies, it is necessary for public water systems and storage facilities to simultaneously supply domestic needs, required fire flow to hydrants and an adequate water reserve. The highest anticipated fire flow is 5,000 gallons per minute.

The Signal Hill water system, like most municipal water supplies in Southern California, utilizes both groundwater and imported water supplies. The City produces water from two wells located north of the City limits in Long Beach and imports water from the Metropolitan Water District of Southern California. Two additional wells are under construction in Long Beach. Water is stored in reservoirs in the City (see Circulation and Infrastructure Element). Interconnections with the City of Long Beach Water Department are available for emergency supplies. It is recommended that a storage volume equal to the supply requirements for a maximum day's demand be provided. This emergency storage amounts to approximately 8.3 million gallons, plus 1.5 million gallons for fire flow or 9.8 million gallons. This volume requirement necessitated the proposal for a new 5-million gallon tank atop the Hill. Once constructed, this may reduce the I.S.O. deficiency and upgrade the class rating.

TABLE 3

FIRE FLOW REQUIREMENTS[1]

Land Use Classification	Fire Flow Requirement (GPM)	Fire Flow Duration (Hours)	Hydrant Spacing (Ft.)
New Construction, Plan Stage			
Low Density, Residential, (R-1)	1250	2	600
Low Density, Residential, (R-2)	1500	2	600
All other (including multiple family, commercial, industrial, public, schools, etc.) based on lot size as follows:			
Under 10,000 square feet	1500	2	300
10,000 - 19,999	2000	2	300
20,000 - 29,999	2500	2	300
30,000 - 39,999	3000	3	300
40,000 - 49,999	3500	3	300
50,000 - 59,999	4000	4	300
60,000 - 69,999	4500	4	300
70,000 - and over	5000	5	300

Must have 20 psi residual pressure in lines.

Notes:

Fire flow requirements are based on details of construction, siting, surrounding uses, and other risk factors. The range of required flows is 2,000 gpm for 2 hours to 5000 gpm for 5 hours. Beginning with a basic requirement of 1,000 gpm, modifications are possible as listed below:

a. For each story above ground level, add 500 gpm.

b. For each "exposure" within 50 feet, add 500 gpm. "Exposure" includes property lines, other buildings, or similar risks. For each hazardous occupancy, add 1,000 gpm.

c. Credits of up to 25% reduction in requirements for type III or better construction, sprinkler systems and similar fire prevention measures are available.

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1 Interview with Jerry Peskett, Los Angeles County Fire Department, December 1985.

3. Crime

The City of Signal Hill maintains a municipal police department that is responsible for law enforcement and is available for emergency and rescue operations within the City.

The Signal Hill Police Department maintains the following personnel: a police chief, 2 police lieutenants, 6 sergeants, 19 sworn officers, 6 reserve officers and 10 civilian employees. The department provides security and rescue services to the City and receives approximately 1,000 calls per month with the p.m. swing shift (e.g., 2:30 p.m. to 10:30 p.m.) receiving more calls than any other shift. The estimated response time to any location within the City is 3 minutes.

There is a minimum of 3 patrol officers and 1 supervising officer on duty during each of the 3 shifts operating within a 24-hour period. Aside from the patrol officers on duty, there are also 2 detectives, 1 detective sergeant, and 1 detective/crime prevention officer available for service to the community.

Strictly comparable staffing figures for similar jurisdictions are not easily available. The Commission on Peace Officers Standards and Training of California has published data on officer/population ratios. For 35 cities in the 25,000 to 35,000 population range, there is a ratio of 1 officer for 637 persons in the service population. For 10 local South Bay cities, the ratio is 1 officer for 586 persons. It should be noted that these gross comparisons do not account for local conditions, policies, or service philosophies. The City of El Segundo, for instance, has a ratio of 230 persons per officer, whereas the City of Downey has a ratio of 711.

With the increase demand for services during the day, the Signal Hill Police Department may enlist the help of the Long Beach Police Department. A mutual aid agreement with the City of Long Beach establishes a reciprocal law enforcement status between the two cities. The Signal Hill Police Department also participates in a statewide mutual aid program. Assistance from the Long Beach Police Department, when needed, is often adequate to the support Signal Hill's law enforcement needs; however, if additional assistance is needed, the City of Signal Hill may call upon the services of the Los Angeles County Sherriff's Department and the California Highway Patrol.

Since the capabilities of the Police Department could be limited by available manpower, facilities, and equipment, citizen participation in crime prevention is invaluable. Residents are encouraged to become active defenders against crime in their community through participation in police-operated programs. . Such educational and citizen participation programs are offered by the Signal Hill Police Department as a means of limiting opportunities for crime within the community. Personal safety demonstrations and neighborhood watch programs are available to community residents to increase awareness of strangers and possible violators.[1]

4. Hazardous and Toxic Materials

Several industries operate within the City of Signal Hill using hazardous materials and/or procedures. Of major concern to the safety of Signal Hill residents is the extraction, transport and storage of crude oil and petroleum products (see Figure 1, Hazardous Materials). Other potentially hazardous industries include paint manufacturing, plastics processing, leather dyeing operations, and battery repair centers. There is also a company that combines crude oil and chemicals to create a tar-like material for construction, a corporation specializing in electronic plating of paint to create a special insulation, one company that uses sulphuric acid to purify water and a metal-galvanizing plant. All these manufacturers use or produce some type of toxic material hazardous to human health.

The City has adopted the Sanitary Sewer and Industrial Waste Code of Los Angeles County by reference. This code covers the handling and treatment of hazardous and toxic material released into the City's sewer system.

Oil Recovery

Oil recovery, storage and transmission are highly regulated in Signal Hill. Federal, state and local statutes and ordinances cover design criteria, operations, periodic testing and inspection, maintenance, permit procedures, control of spills,

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1 A major portion of the information contained in this crime section was derived from a telephone interview with Michael McCrary, Chief of Police, City of Signal Hill Police Department, August 1985.

abandonment procedures, soundproofing and similar elements of community concern.[1]

Oil recovery hazards are of concern in the City of Signal Hill, due to the number of abandoned wells and oil sumps and pits throughout the City that may have been improperly backfilled. No wells have been improperly abandoned since 1965, due to stringent City and state requirements. The State Division of Oil and Gas and the City require proper abandonment and restoration of these sites.

The City requires a soils and foundation investigation on nearly every new structure built, with special attention given to any potential development site within an oil field. The City is presently requiring the venting of properly abandoned wells over which buildings will be placed. The Division of Oil and Gas is now recommending this procedure throughout California.

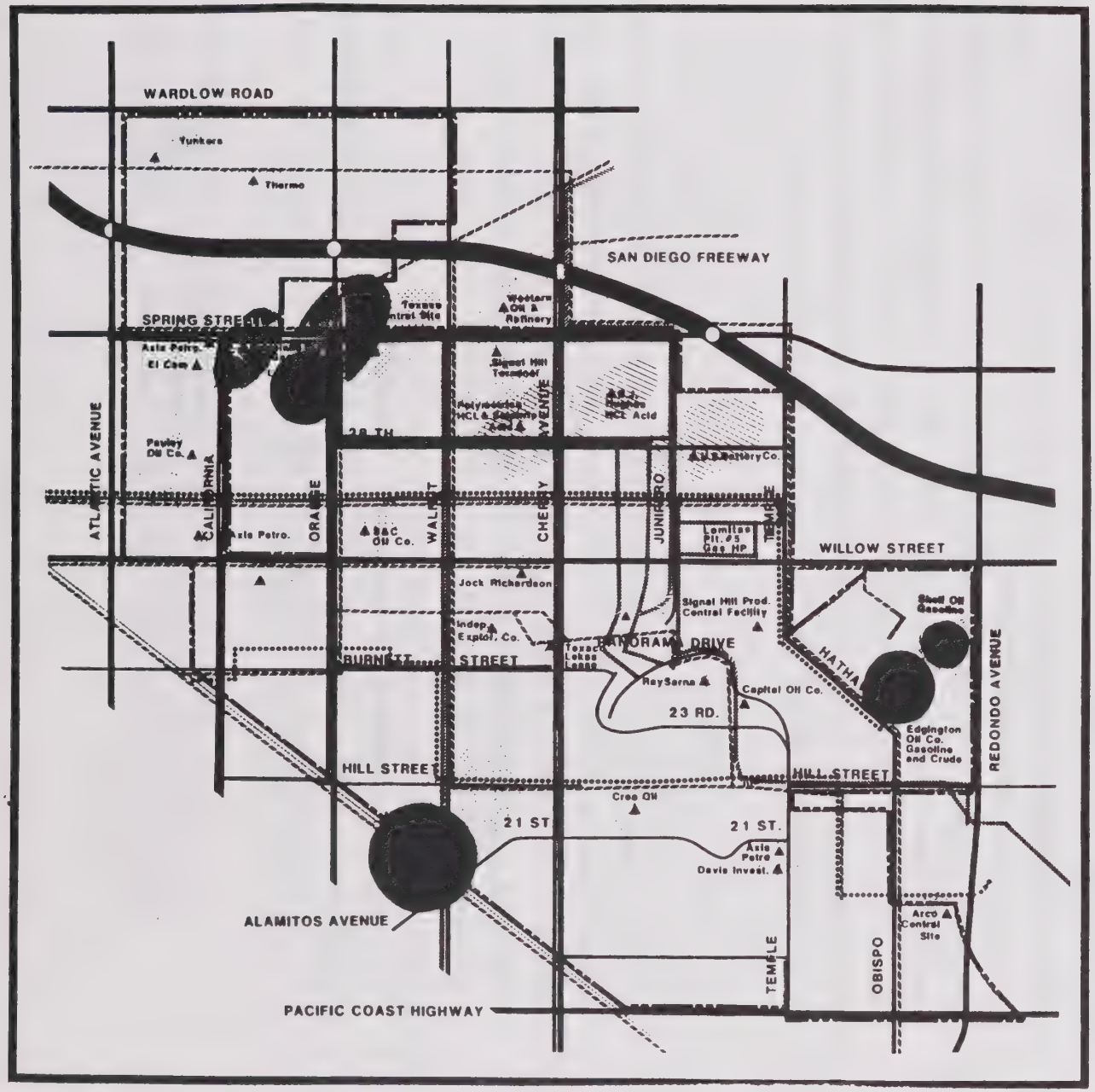
Oil and gas withdrawal may create a condition of subsidence, the gradual settling or sinking of the earth's surface with little or no horizontal motion. This sinking had been experienced in the nearby Wilmington Oil Fields of Long Beach, but repressurization has stopped the subsidence. To date, the level of subsidence within Signal Hill has been insignificant.

Secondary oil recovery methods, including a water-flooding program, complicates the geologic hazards identified in the Seismic Safety Element. Low-energy seismic events could be induced by water injection of oil extraction areas, although such an occurrence is considered remote.

Hazards are always present from the periodic maintenance operations of oil wells, which are typically conducted once or twice a year. These operations require portable derricks that range from 85 to 100 feet in height. Although rare, there is always the possibility that a derrick could collapse onto an adjacent structure.

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1 Oil Production Activities in the City of Signal Hill — A Policy Direction. City of Signal Hill. July 1983, Pages 11-20. Unless otherwise specified, information in this section was obtained from the cited report.



POTENTIALLY HAZARDOUS MATERIALS

LEGEND

Pipelines (Underground)

- High pressure gas above 50 PSI
- High pressure gas below 50 PSI
- Gasoline
- Crude oil

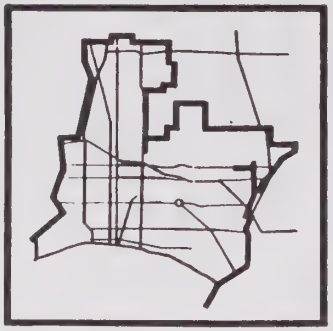
Hazardous Facilities (Above ground)

- Crude oil (Min. 500 barrels)*
- Gas and Gasoline (Min. 42,000 gal.)*
- Chemical acid (Min. 500-1,000 gal.)*
- Possible explosions
- Hazardous facility

- City Boundary
- Arterial Highway

*Possible evacuation zone

MAY 1986





City of Signal Hill

FIGURE 1

SAFETY

Petroleum Storage

Besides oil extraction, processing and storage of crude oil and petroleum products is a major industry in Signal Hill. There are three major oil storage facilities in the City: the Edgington Oil Company facility on Hathaway Avenue; the Signal Hill Terminal facility on Spring Street; and the Shell terminal facility on Redondo Avenue (see Figure 1). Recyclable Class I hazardous wastes resulting from oil production activities are transported to various holding facilities outside the City of Signal Hill where they are stored before being treated and transformed into sources of renewable energy. Class I hazardous wastes, which are nonrecyclable, are transported to state-approved waste disposal sites located either in Santa Barbara County or Kettleman City, California.

The oil companies in the City plan to continue oil extraction activities through secondary recovery methods beyond the year 2000; however, since both the Santa Barbara County[1] and Kettleman City hazardous waste disposal facilities are expected reach capacity by the year 2000, the oil companies must search for new locations to store these nonrecyclable toxic wastes. The City is working with others to investigate sites that are noncontaminating to both human life and natural environmental resources.[2]

The storage of large quantities of crude oil, but more particularly the storage of refined petroleum products, requires onsite precautionary measures to maximize the safety of such facilities. The consolidated Fire Protection Districts of Los Angeles County regulate the storage of all flammable liquids, including crude oil. The City of Signal Hill requires a conditional use permit for storage facilities. All oil-related activities are also regulated by the Air Quality Management District and the Los Angeles County Fire Department.

To reduce the possibility of fire, explosion or other catastrophe, the Fire Code regulates the location of all storage tanks. This includes the spacing between tanks, the types of foundations and supports, drainage facilities, dikes, walls and fire-

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1 The Santa Barbara County facility is at the time of this writing (February 1986) the center of some controversy. Its future availability is doubtful.

2 Telephone interview with Oliver H. Covall, City of Signal Hill, oil field superintendent.

fighting equipment and safety standards. Even with the best of regulations, extremely hazardous areas should be isolated from the public by utilizing techniques such as land use controls.

Hazardous situations are greatest in oil storage areas if any of the following conditions exist:

1. Size of the storage facility is large (over 10,000 bbl. capacity)
2. Specific gravity of the oil stored is over approximately 25 degrees API.
3. Storage is in pressurized tanks (such as LPG).
4. There is inadequate diking in the containment areas.
5. There is a lack of proper fire-fighting equipment within the storage area.
6. Storage is in unpressurized tanks or nonvacuum sealed tanks.

In the event of a major petroleum accident involving a nominal-sized tank containing 50,000 barrels of light crude, damaging results can be expected.

Some of the following effects could result from a tank rupture and subsequent fire, whereas others could occur if a vapor-air mixture in the tank resulted in an explosion:

Maximal Radii From Petroleum Tank	Adverse Effect
200 ft.	Severe structural damage from heat generated by burning fuel in the containment area.
275 ft.	Major structural damage from blast overpressure.
375 ft.	Personal injury resulting from heat exposure.
420 ft.	General structural damage to buildings, automobiles and rupture of other tanks caused by heat radiation.
550 ft.	Personal injury from blast overpressure (distance at which eardrums rupture).
1,500 ft.	Damage to property and injury from flying debris (explosion).

In Signal Hill, there are oil storage facilities of extremely large capacity: the Edgington Oil Company facility on Hathaway Avenue (1.2 million bbls.) and the Signal Hill Terminal facility on Spring Street (approximately 0.5 million bbls.). Both storage tank farms are protected by large diked areas and their own fire-fighting equipment.

Storage of oil with high gasoline content presents another potential hazard if the facility lacks an approved gas recovery system. As the specific gravity of crude oil increases beyond 25 degrees API, it contains an increasing volume of gasoline vapors, making it extremely volatile. Approximately 15 percent of the oil produced in Signal Hill has a specific gravity above 25 degrees API. The majority of the oil is around 20 to 22 degrees API, the highest being 32 degrees API.

Natural gas is stored in pressurized tanks adjacent to the City boundary near the San Diego Freeway between Temple and Junipero Avenues by the Long Beach Gas Department. Also, in the City of Long Beach, Petrolane/Lomita Gas stores butane and small quantities of casing head gas at their plant on Orange Avenue and Spring Street. In Signal Hill, two 750-barrel butane storage tanks are located at the Hathaway Tank Farm, operated by Edgington Oil Company. These tanks will be protected by a water-spray deluge system and will be separated from other equipment. A relatively large, clear area must be maintained around such tanks in case of a leak or rupture.

All the large storage areas in Signal Hill have ample diked areas, gas recovery systems, and their own fire-fighting facilities. Many of these safety precautions are self-regulated due to compliance with requirements of insurance carriers and federal and state regulations.

Petroleum Refining

A limited number of petroleum refining activities exist within the Signal Hill City limits. The oldest facility is the MacMillan Refinery at 2105 Walnut Avenue. MacMillan produces a variety of products, including, gasoline, motor oil and kerosene. Because of MacMillan's proximity to offices, residences and the Signal Hill Elementary School, any expansion of the refinery should be viewed with reservation and concern for surrounding land uses.

In the industrialized area along 29th Street between Walnut and Gardena Avenues, two refiners are located. McAuley Oil Company operates a small dehydration plant at 1835 East 29th Street. The heating capability of this plant is quite limited and, consequently, the primary activity involves removing water from crude oil.

Eco Petroleum Refinery is located at 1840 East 29th Street. This topping facility produces marine fuel oil, naptha, diesel fuel and asphalt. The plant can process approximately 14,000 barrels of crude oil per day.

Refining facilities are governed by various air quality management agencies. They are also periodically inspected by the Los Angeles County Fire Department to ensure maintenance of onsite fire preventive equipment. Any expansion or introduction of refining operations requires environmental review and issuance of a conditional use permit by the City.

Transport of Hazardous Materials

A. Underground Pipelines

The extraction, processing and storage of crude oil and petroleum products within Signal Hill requires a complex network of transportation links for moving these materials. The bulk of material is shipped via underground pipelines. Because of the development of oil in Signal Hill and its location close to major producers, refiners and storage facilities in Long Beach, Carson, Wilmington, and other jurisdictions, Signal Hill is honeycombed with pipelines. The principal pipeline routes include: Cherry, Orange, Temple, California and Walnut avenues; and Spring, 29th, 28th, and Willow streets.

All owners of active pipelines within City right-of-way are required to obtain franchises issued by the City Council. The franchise requires a rental payment based on length and pipe diameter. It also establishes procedures for abandonment and transfer of lines. Although this procedure governs most active lines, the rapid development of oil in the City left numerous pipelines in uncharted locations. Most of these lines are unmapped, inactive and unclaimed.

Within any area of the City where oil operations once existed, excavation on private property or in the public rights-of-way can be expected to unearth unknown pipelines. Aside from privately borne cost to remove such lines on private property, City public works improvement projects consistently experience unforeseen costs from pipeline removal or necessary rerouting.

Although pipeline transport is the safest method for shipping petroleum products, pipeline failure may occur. The risk posed to the public from pipeline rupture varies with the type of material in the pipeline. A crude oil leak, for example, poses minimal danger of explosion or fire unless clean, high-gravity crude oil is involved. The known pipelines in the City transport oil, gas and water. The risk of fire or explosion posed to the public from this material is considered to be very low.

There is also a potential risk that pipeline rupture and resultant leakage would create an oil spill and environmental degradation. Should this occur in Signal Hill, the responsible company would have no means of detection until the oil actually rose to the surface.

Ruptures and resultant leakage have three possible causes:

1. Corrosion of the steel pipes. Materials transported in pipelines in the City are not corrosive, and the risk of corrosive leakage is not considered significant.

2. Rupture as a result of ground displacement during an earthquake. Moderate earthquakes are not generally considered significant hazards to steel pipelines, although the age and condition of the line and the force of the earthquake are important considerations.

3. Accidental rupture during site grading. This is the most likely cause in Signal Hill.

Pipeline leaks or ruptures are of major concern to most cities with active oil production facilities. Most leaks or ruptures are small and are normally contained within a well site. Some spills can affect public rights-of-way and drain into flood control channels through the storm drain system. In Signal Hill, when leaks or

ruptures occur, there is generally no means of detection until the oil actually rises to the surface. By that time, significant environmental degradation may have occurred.

When a leak is discovered, it is reported to the Police Department and to the emergency call system called "Wheel." Its location is indicated and Wheel notifies three oil companies on its alert call system who, in turn, call three oil firms each, and so on. Each party receiving the call checks their pipeline map to see if they have a line in that vicinity. If they do not, they do not respond.

Ordinarily, the police department is responsible for traffic control, keeping autos and trucks out of the spill area. Depending on the nature of the spilled material, its probability of containment and where it is likely to end up before it can be contained, a number of agencies must be notified. The responsible oil company must notify one or more of the following agencies: Los Angeles County Flood Control District, the Office of Emergency Services, the State Department of Oil and Gas, the Regional Water Quality Control Board, the Coast Guard, the Environmental Protection Agency and/or the State Department of Agriculture. These agencies may supervise details of cleanup and disposal and file required reports.

The City's principal goal is to have cleanup and repairs begun as soon as possible to minimize damage to the environment and limit hazard to traffic and property. Ideally, the first oil company on the scene should begin cleanup and repairs. The difficulty is that it may not be their structure that is leaking--at some locations in the City there are upwards of 10 or more different transmission lines under City streets. The company might then be left with a cost they could not recover. In numerous situations, ownership of the structure could not be determined, and the City has had to shoulder clean-up costs.

A second problem relates to the disposal of the waste from the leak or rupture. Current regulations require that it be disposed of in a Class I hazardous waste facility. Costs of transporting these wastes to such facilities are high and are expected to rise in the future.

B. Surface Transport

Transportation of hazardous materials is controlled by the State Parcel Carrying Commission and the Interstate Commerce Commission. Vehicles containing certain hazardous products are required by state law to log in at departure and arrival and follow designated routes. Within the City of Signal Hill, truck routes are designated by resolution of the City Council (see Circulation and Infrastructure Element).

Spills of Hazardous Materials

Mitigation of the hazardous effects of toxic spills is handled by a number of local, regional, state and federal agencies. Because of the large oil recovery operations, the City staff includes an oil field inspector responsible for locating oil and other toxic hazards and when spills occur, identifying the chemicals involved and notifying the appropriate authorities.

For major spills, the Department of Fish and Game, the Environmental Protection Agency, the United States Coast Guard, the Regional Water Quality Control Board, the California Division of Oil and Gas, the State Office of Emergency Services, the Los Angeles County Flood Control District and the County Engineer must all be notified. The City must report any incident or situation that could cause a pollutant to enter surface or groundwaters. This includes all spills of pollutants to the ground that, by gravity or other means, will flow or be flushed to the street and eventually to a storm drain, or river, that goes to the ocean. These systems carry their water flow without treatment and pollutants must, if at all possible, be removed. The Flood Control District will provide access to, and assist in the tracing, containment and removal of water pollutants in the system. The Police Department and Public Works Department maintains the list of agencies to be called in the event of an oil spill and will make the requisite calls in an emergency.

Other Hazardous Materials

Aside from oil-related operations, a number of other industries utilize or manufacture products are considered hazardous. One agency regulating many industries that produce noxious odors and/or toxic fumes is the South Coast Air Quality Management District. Some activities, such as roofing, which uses heated tar, and asphalt paving of streets, emit toxic fumes but remain largely unregulated.

The Los Angeles County Fire Department regulates the amount of hazardous chemicals stored at any one location, as well as the adequacy of available fire protection. Disposal of industrial wastes requires a permit issued through the City for the County Sanitation District of Los Angeles County.

Local regulatory mechanisms for governing industries using hazardous materials include zoning requirements of the Signal Hill Municipal Code and business license inspections. The Building Department inspects facilities for structural compatibility with any proposed use before issuing business licenses.

B. Seismic Safety

1. Geologic Hazards

Regional Fault Zones: Damages incurred in Signal Hill from any earthquake activity are, in part, a result of underlying geology, proximity to faults and type of local faults. The Signal Hill area is composed primarily of a broad, slightly elevated marine terrace that is underlain by over 15,000 feet of stratified sedimentary rocks of marine origin. This marine section is composed of interbedded units of sandstone, siltstone and shale ranging in age from Miocene (approximately 7 million years old) to late Pleistocene (approximately 2 million years old). Regional uplift, along with some local folding and faulting, has raised portions of the City area to its present elevation above sea level and the Hill to its height of 365 feet. There are several significant regional faults and fault zones that do not pass through the City, but that could have significant groundshaking effects. These are displayed in Figure 2, along with epicenter locations for a number of the more significant historic earthquakes.

The most prominent fault feature in this category is the San Andreas, a major strike-slip feature that passes about 44 miles northeast of the general study area, and is recognized as being capable of Richter-Magnitude 8.0+ earthquakes. The San Fernando fault was the source of a 6.6 magnitude earthquake in 1971, which was felt throughout the Los Angeles basin.

Other major active faults and associated Richter Magnitudes of historic earthquakes with the faults in the vicinity include the Whittier-Elsinore Zone, 15 miles to the

northeast, 5.0; the Sierra Madre Zone, 21 miles to the north, 6.4; and the Norwalk Fault, 4 miles to the northeast, 5.0.

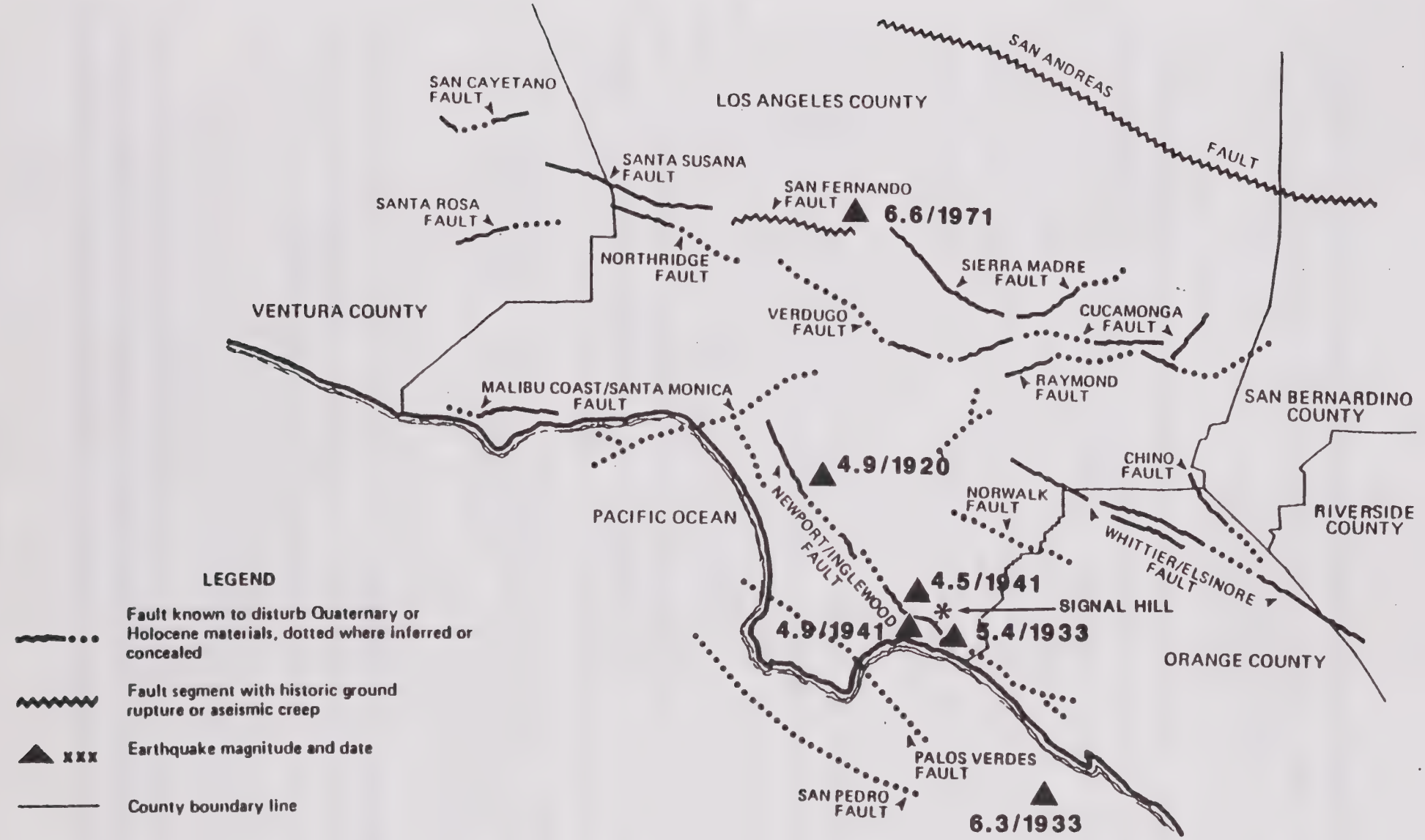
Local Seismicity

Earthquake history has shown that the most likely place for fault movement to occur is on an existing fault. Major active faults represent the most likely location for future fault rupture. The Newport-Inglewood Fault System cuts diagonally across the marine terrace in Signal Hill. It is the most significant seismic feature in the Signal Hill area and is considered seismically active. The 1933 Long Beach earthquake resulted from activity along this fault (see Figure 2 for epicenter location). Several other faults are traceable in the subsurface within the City and vary in potential activity (see Figure 3, Geologic and Slope Hazards). Earthquakes associated with this fault system will not necessarily cause surface rupture; however, if fault movement were to occur, such movement would be expected to cause severe damage to overlying structures and would most probably interrupt the majority of utilities and services that cross the displacement.

The Newport-Inglewood Fault System is a nearly linear alignment of faults and folds extending 45 miles along the southwestern side of the Los Angeles basin. It can be traced as a series of topographic hills, ridges and mesas from the Santa Monica Mountains to Newport Beach, where it trends offshore. Structures along the zone of deformation act as groundwater barriers and, at greater depths, as petroleum traps. Continuing seismic activity has been evidenced most prominently in recent times by the 1920 Inglewood and 1933 Long Beach earthquakes.[1]

Since the Newport-Inglewood Fault system is a potentially active fault trace of the San Andreas Fault, it has been designated by the Alquist-Priolo Geologic Hazards Zones Act as a Special Studies Zone. The intent of this act is to protect public safety from the hazard of fault rupture by avoiding, to the extent possible, the construction of structures for human occupancy astride hazardous faults. The precise location and identification of hazardous faults within or near a zone of potentially active faults can be determined only through detailed geologic investiga-

1 The Long Beach earthquake was magnitude 6.3, and was centered 3.5 miles offshore, southwest of Newport Beach.



SOURCE: DRAFT EIR FOR LONG BEACH-SIGNAL HILL BUSINESS CENTER ATLANTIS SCIENTIFIC, 1985; WOODWARD, McNEILL & STATE DEPT. OF WATER RESOURCES.

FIGURE 2

REGIONAL FAULT ZONES

North

0 7.5 15 MILES

tions. Thus, this Act establishes the concept of a Special Studies Zone—an area of limited extent centered on recognized faults. The zone boundaries identify those areas that the State Geologist believes warrants special geologic investigations to detect the presence or absence of hazardous faults.

The effect of the Special Studies Zone designation is to require that developers of projects within the identified zone supply a report prepared by a registered geologist, indicating whether the project is underlain by an "active" or "potentially active" fault trace. If no such fault trace exists constraints on private development are not generally imposed (other than to ensure that the building be designed to withstand ground shaking). If a fault trace is discovered, specific building setbacks from the identified trace location must be maintained. To date, no fault traces have been discovered in Signal Hill.

Active or potentially active faults within the Newport-Inglewood Special Studies Zone in Signal Hill include the Cherry Hill Fault, the Northeast Flank Fault, Pickler Fault and the Reservoir Hill Fault (see Figure 3). These faults are associated with the anticline that forms Signal and Reservoir Hills. Extensive petroleum and groundwater exploration have delineated these faults in the subsurface. Surface expression of the faults is generally limited to weathered scarps that form the flanks of the hills. No ground displacement (surface rupture) has been observed along the faults of the Newport-Inglewood Zone in recent geologic times (last 10,000 years).

The Marine and Wardlow-Airport Faults are traceable only in the subsurface and are not considered potentially active, although they may be associated with the Newport-Inglewood Fault System.

Groundshaking: Groundshaking is the description given to the ground surface vibrations resulting from an earthquake. It is most severe near the source of energy release and/or ground displacement and becomes weaker further from the earthquake. However, groundshaking can be significant and could cause structural damage up to distances of 100 miles or more.

Groundshaking can affect very large areas (up to 50,000 square miles or more) due to an earthquake of significant magnitude and is usually the greatest cause of damage, especially in urban areas. Structures of all types are susceptible to groundshaking,

and most deaths resulting from earthquakes historically are a result of structural failure due to groundshaking.

The main variable factors that determine the extent of damage caused by groundshaking vibrations are:

1. Type of soil.
2. Earthquake design of structure.
3. Quality of materials and construction.
4. Intensity and duration of groundshaking.

There is significant evidence to indicate that the soil beneath a site influences the earthquake groundshaking characteristics at that site. However, the soil influence partly depends on the nature of the earthquake and the response of (and therefore, damage to) any structure depends on the characteristics of the structure, soil profile and earthquake. Evidence exists from recent earthquakes (Seed, Whitman, et al., 1971; Seed and Idriss 1971), as well as the 1933 Long Beach Earthquake (Martel 1933), that certain earthquake/structure combinations can result in greater structure damage in stiff soils. Such a combination could result from an earthquake and structure with approximately the same characteristics responding to a nearby earthquake with the same predominant period of vibration.

Slope Instability: Slope instability during earthquakes can be an important aspect of seismic ground failure. This is most often manifested as landslides. The areas most susceptible to this condition are those where:

a. Slopes are greater than 2:1 horizontal to vertical.
b. Soils or soil lenses are weak, cohesionless, or not cemented.
c. Bedding dips out of the slope.
d. Groundwater is present.

Landslides are described as the ultimate manifestation of unstable slopes, and are sudden, relatively rapid downslope movements of soil, rock and debris as a mass. The rate of downslope movement of earth material ranges from miles per hour, in the case of mudflows, to rates measureable in inches per month or year or less, in the case of soil creep. The rate of advance is a function of several factors, including:

- o Degree of fluid saturation.
- o Shear strength of the earth materials.
- o Slope morphology.
- o Mass and thickness of the deposit.
- o Mode of detachment.
- o Type and extent of vegetative cover.

Due to the severe slope of Signal Hill and the high seismic hazard potential, the topography of the Hill and the condition of the soils present an important issue to public safety. Although the soils of Signal Hill, which are characterized primarily by sand, silt and clay deposits, are considered to be a sound foundation for buildings and development, the possibility of a geologic hazard always exists. The slope north of Panorama Drive and south of 23rd Street and Stanley Avenue represents the steepest incline in the City (see Figure 3).

Appropriate planning and prudent design are required to decrease the danger and possibility of a severe slope hazard, without excessive cost.

Liquefaction: Liquefaction is the phenomenon in which soils become fluid (lose all shear strength) for short periods during an earthquake. It results from shaking of sands and silts that are lacking in cohesion, packed loose to medium dense and saturated (usually below the groundwater table). During shaking, the sands tend to compact and thereby increase the pressure in the water between the grains. If the shaking is of sufficient strength and duration, grain-to-grain contact and, therefore, strength is lost instantaneously, and the soil may become fluid and mobile.

Depending on other conditions such as density, ground slope and stratification, the temporary loss of strength may result not only in surface sand and soils or cracks, but may also lead to foundation failures, landslides and excessive subsidence.

Studies of recent earthquakes have concluded that some liquefaction has occurred in every major earthquake observed around the world in the past 10 to 15 years. Other studies have concluded that liquefaction has been associated with major earthquakes throughout history.

To have a potential for liquefaction, three simultaneous conditions are necessary. These are: (a) generally cohesionless soils; (b) high groundwater; and (c) ground-shaking. All three of these conditions are not expected simultaneously in the City of Signal Hill. Accordingly, the potential for a seismically induced liquefaction hazard is considered slight for the City.

Settlement: Settlement occurs when a large and heavy load is placed on a soil that suffers from low density. This condition causes the soil to compact and the overlaying structure to sink.

Settlement may also be induced beyond normal measures by strong seismic groundshaking. In saturated granular soils, water pressure between grains that is built up during earthquakes may lead to settlement after the shaking has stopped and the pressure reduces. Earthquake-induced settlement can also occur in dry or moist granular materials simply as a result of shaking without any such water pressure buildup.

In general, the conditions necessary to produce settlement are similar to those needed for liquefaction. Other than as discussed above in the section on oil recovery, the City of Signal Hill does not possess areas susceptible to settlement; it is not considered a significant geologic threat.

Tsunamis: A tsunami is a sea wave generated by a submarine earthquake, landslide or volcanic action. Tsunamis travel across the ocean as powerful, long, but low waves. They are typically 50 miles long and only 1 or 2 feet high. Traveling at almost 500 mph in the Pacific, such a wave in the open ocean causes no problems, and, in fact, the slope of the wave front may be imperceptible to a ship at sea. However, as the tsunami waves approach the coastline, they are affected by shallow bottom topography and the configuration of the coastline, which transforms the waves into very high and potentially devastating waves. If large waves do not occur, strong currents can cause extensive damage.

Although the California coastline has been struck by several significant tsunamis during the past 40 years, a major tsunami caused by either of the above events is considered extremely remote for the City of Signal Hill. Therefore, tsunamis are not serious threats to life and property in Signal Hill.

2. Structural Hazards[1]

Seiches: A seiche is an earthquake-induced wave that can be generated in an enclosed body of liquid of any size. In the past, seiches have most frequently been associated with large bodies of water such as lakes and reservoirs, but they may also occur within other bodies of liquid, such as an oil storage tank.

If an earthquake of a magnitude 6.5 or greater were to occur along the Newport-Inglewood Fault system, it could create a major seiche hazard in water reservoirs and many of the oil storage tanks located within Signal Hill City limits. If the groundshaking and resulting seiche were severe enough, it could cause the storage tanks to burst or leak, thereby releasing its contents. Such an event could result in extensive structure failure, economic loss and structure failure and hazard to public safety.

Flooding: Seismically induced flooding is primarily the result of insufficient water retaining structures, tsunamis or seiches as described above. Flooding effects could result in extensive economic loss in structurally damaged areas, but due to the elevated topography of Signal Hill, flooding would be localized. In the event of a sieche occurring in the Hilltop water tanks, proposed residential zones in the Hill area may be subject to some degree of flooding. This would depend upon location in relation to topographic features. Hazards should be mitigated in the City's site and plan development review procedures. In addition, inspection programs, building codes and performance standards should also address this potential hazard.

Building: Groundshaking will affect all structures; the partial or total collapse of structures often results in death and injury to residents. The disaster may be compounded by confusion and concurrent breakdown in life-essential services, such as public utilities, water storage facilities, medical care and law enforcement. Because of their importance, these facilities must be located in structures that are earthquake resistant. Moreover, continual inspection and maintenance must be a part of any seismic safety and disaster planning program.

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1 A major portion of the information presented in the structural hazards section was derived from: City of Signal Hill, Seismic Safety Element of the General Plan, revised in November 1977; City of Signal Hill, Seismic Safety Element (prepared by Woodward-McNeill Associates), September 16, 1974.

One structure of immediate concern is an unreinforced masonry building at Cherry Avenue and 21st Street. This building should be subjected to hazard amelioration programs. Currently used as a dry cleaners, it was identified as historically significant in the citywide survey of historic structures.

Other structures worthy of special consideration for their relative seismic stability include oil extraction sites and associated central processing facilities. Numerous residential structures exist within the currently defined Alquist-Priolo Special Studies Zone, but are of wood-frame type construction, which reacts most favorably when subjected to strong groundshaking. The numerous communication antennas located atop Signal Hill could suffer sufficient damage to render them inoperative given severe earthquake conditions, and should thus be subject to periodic inspection.

Roadways: Impediments to evacuation or post-disaster emergency vehicle access could occur if surface streets are disrupted from surface rupture or clogged with fallen debris. The Atlantic Avenue's interchange of the San Diego Freeway is susceptible to possible earthquake damage because of its close proximity to the Cherry Hill Fault. Major east/west arterials subject to the same potentials include Spring Street, Willow Street and Pacific Coast Highway; major north/south arterials include Redondo, Cherry, Orange and Atlantic avenues. Both state and federal construction codes require that freeway overpassess be of earthquake-resistive construction. A major quake, however, could dislodge portions of the overpasses, posing serious danger to motorists and block traffic flow, as evidenced by sections of the I-210 and I-5 freeways collapse during the 1971 San Fernando earthquake.

Electrical: Signal Hill receives its electrical power from Southern California Edison and is currently undergrounding electrical utility lines as funding is made available. Major transmission and distribution lines are shown in the Circulation Element, Figure 2. Until undergrounding is completed, the existing overhead wires could pose a significant hazard during a major seismic event if they were to fall across streets and block the passage of emergency vehicles or evacuating citizens. This is most critical on Spring Street, where tank farms exist; Walnut, south of 28th; Willow, east of Junipero; and Redondo Avenue. The broken lines could also ignite fires or explosions through sparking, as well as limit power to emergency facilities. Downed power lines offer electrocution hazards as well as disruption of power station and

water utility facilities, posing a threat to fire fighting capacities. A comprehensive plan to underground all electrical lines will reduce the potential threat to public safety and welfare.

Petroleum: Major oil storage facilities and pipeline corridors traverse the City. These are shown on Figure 1, Potential Hazardous Facilities. Although pipeline transport is the safest method for shipping petroleum products, pipeline failure may occur. Pipelines could be ruptured as a result of ground displacement during a major earthquake. If a pipeline were to rupture as a result of severe seismic activity, the attendant damage could be severe and lead to a major explosion and/or fire.

Natural Gas: The City of Signal Hill, which receives its natural gas supply from the Long Beach Gas Department, also possesses an extensive network of natural gas pipelines. Like petroleum pipelines, pressurized natural gas lines are susceptible to damage wherever they cross seismic fault lines.

The areas surrounding pipelines are also subject to potentially severe fire and explosion hazards if the lines are ruptured in an earthquake. Even without fire or explosion, major leakage from these pipelines could result in considerable damage and require extensive and expensive cleanup. Potential hazards presented by gas pipelines within the City require consideration in all disaster and emergency planning.

3. Seismic Response Areas

Signal Hill has been divided into smaller Seismic Response Areas (SRA). These areas reflect differences in the estimated potential for each seismic hazard. Dividing the City into SRAs not only assists in identifying hazards, but also enhances the City's ability to respond quickly and efficiently to emergencies. These hazards have been discussed previously in this Safety Element; their potentials for occurring are summarized for each SRA in Figure 4.

As shown in Figure 4, SRA "A" is the largest area and is most likely to suffer adverse effects from potential hazards. The hazards most likely to occur in this area are fault rupture, groundshaking, and slope instability. SRA's "B" and "C" are not likely to suffer from fault rupture, but groundshaking is highly likely. Slope instability

possesses only a moderate potential for occurring in these areas. SRA's "D", "E" and "F" contain a high potential for groundshaking; all other hazards have a remote possibility of occurring in these areas.

Groundshaking appears to be the most dangerous hazard for all of Signal Hill. Liquefaction and settlement, flooding, and tsunami and seiche appear unlikely to occur anywhere in the City. Fault rupture and slope instability maintain high potentials for occurring in isolated areas, and only moderate-to-low potentials for the rest of the City.

4. Disaster Response

In accordance with state laws, the City of Signal Hill adopted (July 1984) an emergency plan that specifies how the City will respond should a major emergency occur. The emergency plan is consistent and compatible with both the California Emergency Plan and the Emergency Resources Management Plan. The City's emergency plan defines policies and procedures to be followed in the event of a major fire or earthquake or a state of war.

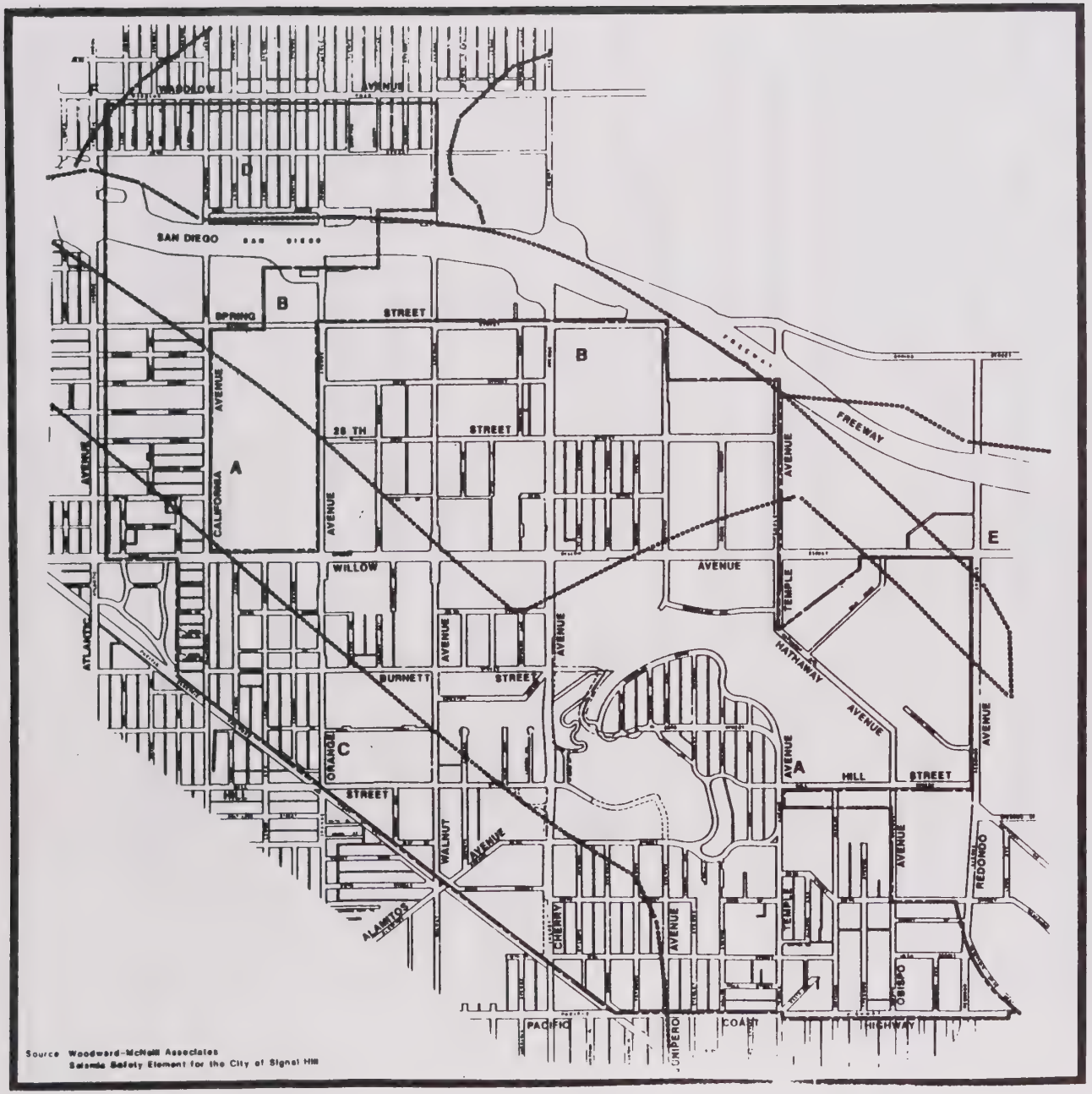
To effectively and economically use material and manpower resources for the maximum benefit of the civilian population in time of emergency, the plan:

1. Defines roles and responsibilities of City employees in an emergency.
2. Provides for the allocation of critical resources at such times.
3. Establishes a basis for mutual aid between and among public agencies at such times.

Its objectives are to:

1. Save lives and protect property.
2. Repair and restore essential systems and services.
3. Provide a basis for direction and control of emergency operations.
4. Provide for the protection, use and distribution of remaining resources.
5. Provide for the continuity of government.
6. Coordinate operations with the emergency service organizations of other jurisdictions.

SEISMIC RESPONSE AREAS



Source Woodward-McNeill Associates
Seismic Safety Element for the City of Signal Hill

LEGEND

SRA	Fault Rupture	Ground Shaking*	Liquefaction/Settling	Slope Instability	Flooding	Tsunami/Seiche
A	1	1	3	1	3	3
B	3	1	3	2	3	3
C	3	1	3	2	3	3
D	3	1	3	3	3	3
E	3	1	3	3	3	3
F	3	1	3	3	3	3

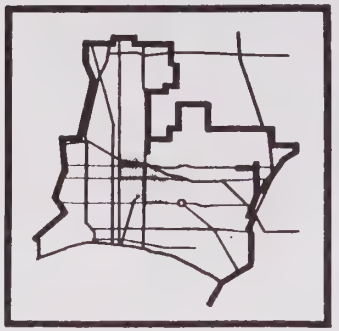
Geologic Hazard Rating*

*Hazard Rating

1-High potential for occurring

2-Moderate potential for occurring

3-Low potential for occurring





City of Signal Hill

FIGURE 4

SAFETY

Specific methods of organization and detailed task assignments are included in the emergency plan. Plans for contingent situations are included as well, to deal with lines of succession, temporary seat of government, preservation or records, and similar concerns.

Preventive measures that the City may implement to thwart the possibility of a major hazard are discussed in the plan, including emergency preparedness and public awareness programs directed at informing and preparing residents for hazards.

During a major disaster, it is essential that certain services be provided and maintained. Failure to provided these services may result in increased loss of life and property. Among the services deemed most essential are communication, law enforcement and medical care.

In December 1985, the City implemented one feature of the plan, the Emergency Operations Center. Located in the Police Department Squad Room, it will become the command center during states of emergency as defined by the California Emergency Services Act, the Governor of California, or the Mayor or the Director of Emergency Services of Signal Hill.

Communications: During a major disaster, such as an earthquake, access to communication lines is vital to human life and safety. The importance of maintaining open communication lines between emergency facilities within the City and outside the City is obvious. Functioning communications systems can save lives and avoid large economic losses.

Aside from maintaining open communication, it is also essential to maintain a functioning transportation system and operational public utilities in order to implement the emergency response plan properly. Without the benefits of fully functioning communications, transportation and public utility lines, the City of Signal Hill may suffer great losses in an emergency.

Law Enforcement: As the protectors of peace and human safety during non-disastrous situations, the City of Signal Hill Police Department carries the added responsibility of regulating peace in the aftermath of a major seismic event. Mutual aid arrangements between the Signal Hill Police Department and the City of Long

Beach Police Department, the Los Angeles County Sheriff's Department, the California Highway Patrol, and the U.S. National Guard are available to provide needed assistance and service in a major emergency. The degree and level of assistance may depend upon the scope of the emergency.

Medical Care: Signal Hill is close to a number of health care facilities. Long Beach Community Hospital at 1720 Termino Avenue, Memorial Medical Center of Long Beach at 2801 Atlantic Avenue, and Saint Mary Medical Center at 1050 Linden Avenue are the three largest hospitals in the area and collectively provide over 1,500 general acute-care hospital beds. Long Beach also supports the 1,200-bed Veteran's Administration Medical Center on 5901 East 7th Street. Additional emergency medical services are provided by several nearby 24-hour emergency centers and the local police and fire departments.

Beginning in mid-1986, the Long Beach Comprehensive Health Care Center (to be operated by the County of Los Angeles Department of Health Services) will be providing ambulatory care services for the residents of Hawaiian Gardens, Lakewood, Long Beach, Signal Hill and Wilmington. The new health center will encompass all the services previously provided at the Long Beach General Hospital including a full range of adult and pediatric services, laboratory and radiology units.[1]

It is not clear if these facilities will provide sufficient bed capacity in the event of a major emergency. Nevertheless, as a coordinating device, the emergency plan provides the basis upon which to plan for emergency medical services.

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1 City of Signal Hill, Draft Environmental Impact Report for Long Beach Signal Hill Business Center (prepared by Atlantis Scientific), March 15, 1985, page 4 to 27.

III. NEEDS, ISSUES AND CONSTRAINTS

A. Introduction

The City of Signal Hill is susceptible to several potential hazards. The impact of these potential hazards, such as fires and seismic activities, can be devastating to both human life and property. The early identification of a city's needs not only allows a city to prepare for potential emergency, but also establishes the foundation for defining goals, formulating policies and implementing programs aimed at minimizing the adverse effects of potential hazards. The following identifies the City's needs for public safety, seismic safety and emergency response.

B. Needs and Issues

The following discussion identifies major needs and issues with respect to public and seismic safety.

- Seismic Hazards: Flooding and fire hazards, which might be present during a major earthquake, are discussed below. Other earthquake-related hazards include structural failure due to the effects of an earthquake. Major risks in Signal Hill exist in Seismic Response Area "A", which is identical with the Alquist-Priolo Zone. The City currently requires geological studies in this area, which are used in development decisions and site review process. Needs include: (a) development of standards for grading and slope stabilization that would be responsive to expected earthquake forces; (b) continued enforcement of existing codes, ordinances and inspection procedures, and updating to the state of the art as necessary; and (c) structural hazard reduction programs for nonreinforced masonry buildings and other structures at high risk of damage in a major earthquake.

- Flooding: Flooding would occur under two relatively rare circumstances: a major storm that overloaded drainage facilities, or an earthquake that ruptured water or oil storage tanks through seiche. The latter situation requires two mitigating measures: (a) continued maintenance and inspection of public and private storage tanks under existing codes,

ordinances and procedures; and (b) site review of new development to deal with drainage. Excess storm waters are not a significant problem, due to topography in the City, and the existing system of facilities. Capital improvements needed are discussed in the Circulation and Infrastructure Element.

- Fire: Fires may result from a number of causes: arson, carelessness and home and industrial accidents, or from ignorance of proper procedures in home or industrial repairs. Pre-1940 structures are of relatively higher risk than newer structures. Of particular importance in Signal Hill is the potential rupture of tanks and pipelines carrying petroleum gases and products through earthquake, grading accidents or corrosion. A compounding factor is the proximity of 66 KV electric powerlines. A break in such a line adjacent to oil or gas storage creates a high potential for fire or explosion. To mitigate these potential hazards, the City needs: (a) knowledge of the locations of pipelines, their capacity and usual contents; (b) continued enforcement and enhancement of site review, inspections, maintenance and related requirement; and (c) public information programs. As noted in the Circulation and Infrastructure Element, the City has planned a 5-million gallon reservoir atop the Hill. This will increase fire flow availability and improve the ISO rating.

- Crime: Although crime is not a major problem in Signal Hill, there are a number of needs (primarily aimed at keeping criminal activity at a minimum): (a) high visibility in the Pacific Coast Highway area; (b) continued citizen participation in crime prevention; and (c) continued public education and information programs.

- Hazardous and Toxic Materials: Because of the concentration of oil-related industry in Signal Hill, these materials exist in large quantities. Although other hazardous substances are present in industrial and commercial locations, they do not present the degree of risk that petroleum products do. Codes, ordinances, inspection and enforcement procedures are largely in place to deal with these hazards. Needs include: (a) continued enforcement of current codes, ordinances and procedures, and updating them to the current state of the art as necessary;

(b) regional Class I hazardous waste disposal sites to replace those located at Casmalia (in Santa Barbara County) and Kettleman City (in Kern County), for economic disposal of the most hazardous and toxic wastes; (c) reduction of public exposure to hazardous areas and facilities as shown on the Hazardous Materials Map; and (d) procedures to define responsibility for repair and cleanup of hazardous, dangerous, or other spilled materials, including cost allocation among companies and agencies for cleanup involved.

- Disaster Response: The City has adopted an emergency plan that prescribes disaster response. The plan sets a general framework and allocates responsibilities to various actors. Most importantly, it establishes a basis for interagency collaboration and mutual aid. Needs are: (a) continued public education and information about disaster preparedness and response, (b) develop an agreement with appropriate emergency medical service providers to serve Signal Hill residents and workers in the event of a disaster, and (c) definition of emergency evaluation routes and procedures.

C. Constraints

As part of the planning process, the identification of barriers, or constraints, to City action is necessary; not so much as a listing of what is impossible, but as a challenge to think creatively about how to surmount the barrier. The following constraints have been identified for the Safety Element:

- Prediction of occurrence and intensity of hazardous events. Current knowledge of earthquakes and other seismic hazards does not permit us to predict the occurrence, intensity, or effects of seismic activity. Similar constraints exist for major storms and accidents. Statistical predictions are of some help. As a result, most planinng actions must be of a preventive nature. Some can be on a contingent basis. In most cases, Signal Hill has carefully defined regulations, inspection procedures and other "before-the-fact" measures. As knowledge of these phenomena increases and is made available to the City, these measures can be sharpened and focused.

- Unknown locations of pipelines. The City has located and mapped an extremely large number of pipelines, and more are being continually added to the inventory record. However, previously unknown lines continue to be found and mapped. This process will continue--hopefully normal development and grading activities will uncover such lines without damaging them.

- Rights attendant on private ownership of property. This constraint on government is a fundamental one. It most often comes into focus in areas of oil field development standards, accessibility for trucks and servicing equipment, nuisance and hazards created for adjacent properties, development in areas of earthquake hazard and slope instability and in the use and deployment of hazardous substances and toxic wastes. The solution lies in the City's ability to set guidelines that can optimize competing goals.

- Fiscal limitations. Although not unique to safety, fiscal constraints exist at every level of government; Signal Hill is no exception. Land acquisition or banking for open space or hazard mitigation, flood control improvements and similar cost items must compete for scarce City dollars. To the extent possible, alternate funding streams must be developed.

- Public commitment to preparedness. On many issues, the public is poorly informed and not well motivated to prepare for potential hazards and disaster situations. This lack of information and motivation leads to greater demands on the governmental response in times of crisis. Public education and preparedness programs are essential if the impacts of hazards and disasters are to be minimized or eliminated.

- Multiple Jurisdictions. A large number of agencies have jurisdiction over safety issues in Signal Hill. As mentioned earlier, 8 or 10 different agencies are involved in toxic/dangerous material spills, depending upon location, extent and characteristics of the material itself. Similar conditions obtain for disaster response situations, although the City's

Emergency Response Plan provides a vehicle to define responsibilities. The problem is repeated with seismic safety issues. The solution lies largely in the difficult and slow process of interjurisdictional collaboration cooperation and mutual problem-solving.

IV. GOALS AND POLICIES

As a fundamental purpose of a Safety Element, the following goals, objectives and policies are intended to serve as a framework for establishing an effective safety program that responds to local safety needs and issues. Wherever possible, goals and policies are quantified to respond to previously identified specific safety needs while recognizing the constraints to Signal Hill's ability to respond. The policies also recognize that safety needs may exceed the City's available financial resources to satisfy these needs; therefore, the policies represent a realistic effort by the City to alleviate its current and future safety needs and issues.

GOAL 1

Minimize the potential risks to life, property and economic and social dislocation resulting from natural and man-made catastrophes, including those resulting from seismic activity, geologic hazards, fires, tank failures, hazardous materials, epidemics or similar disasters.

POLICY 1.1

Maintain, revise and enforce appropriate standards and codes to reduce or avoid all levels of seismic or geologic risk.

POLICY 1.2

Maintain and regularly update all seismic and geologic information regarding public safety in Signal Hill, and ensure the consistency of the information with other affected agencies.

POLICY 1.3

Regulate development in areas within the Alquist-Priolo Special Studies Zone consistent with levels of acceptable risk.

POLICY 1.4

Recognize the need for greater protection and safety of critical use facilities through careful site selection and comprehensive geotechnical evaluation.

POLICY 1.5

Regulate the structural safety of all buildings located within the City, especially buildings constructed before 1933 and buildings housing critical public facilities.

POLICY 1.6

Regulate the amount and type of new development in areas susceptible to fire hazards.

POLICY 1.7

Encourage the Fire Protection District to provide adequate fire protection services throughout the City.

POLICY 1.8

Design future development located near water storage facilities and below the slope of the Hill to minimize the possibility of damage from flooding or a water storage facility leak or rupture.

POLICY 1.9

Regulate the location, use, storage and transportation of hazardous and toxic materials in Signal Hill and protect the public from these hazards.

GOAL 2

Provide an environment that is safe and secure and as free from criminal activity as possible for Signal Hill residents, businesses, employees, visitors and property.

POLICY 2.1

Itensify the City's crime prevention programs.

POLICY 2.2

Respond to crimes against persons and property in Signal Hill in a professional and effective manner.

GOAL 3

Improve the City's capability to respond to natural and man-made emergencies.

POLICY 3.1

Maintain an effective emergency preparedness plan and program.

POLICY 3.2

To the maximum extent possible, assist in the orderly and efficient reconstruction of Signal Hill following a major disaster.

POLICY 3.3

Maintain a high level of interjurisdictional cooperation and communication on emergency planning and management.

GOAL 4

Assist Signal Hill residents, businesses, workers and visitors in minimizing danger and disruption to life and property in the event of a catastrophic event or other emergency.

POLICY 4.1

Undertake preventive measures both for catastrophic events and for more frequent incidents (individual structure fires, minor earthquakes, localized flooding, etc.).

POLICY 4.2

To the extent possible, ensure that people take appropriate and effective action to safeguard life and property during and immediately after emergencies, and assist in returning their lives and businesses to normal, following a catastrophe.

V. IMPLEMENTATION - STRATEGY AND PROGRAM

The following programs shall be used to implement the City's Safety Element goals and policies. This section outlines a coordinated set of actions for carrying out the policies of the Safety Element.

	Implementation Program	Corresponding Policy
1.	Adopt the current Uniform Building Administrative, Mechanical, Plumbing, Housing and Abatement of Dangerous Buildings Codes, and the National Electrical Code.	1.1 1.5
2.	Review periodic changes and amendments to standards and codes for their application to Signal Hill and adopt them as necessary.	1.1
3.	Require geologic engineering and/or soils site investigations on all potential development sites located within the Alquist-Priolo special studies zone. Such investigations are to be completed prior to issuance of a building or other permit.	1.2 1.3
4.	Reinvestigate all potential seismic and geologic hazards located in and around the City every 5 years, or whenever new information becomes available.	1.2 1.3
	a. Precisely redefine and delineate actual fault traces in the Alquist-Priolo special studies zone.	
	b. Reinvestigate the potential for slope instability and landslide through geologic investigations of current conditions in and around the hill.	
5.	Increase public awareness by developing an education program for residents and businesses on emergency preparedness.	4.1 4.2
6.	Evaluate and implement, as appropriate, a program requiring developers to institute preventive maintenance for all manufactured slopes, to provide a slope warranty, and to include such provisions in CC&Rs, and in schedule of association fees.	1.1 1.3
7.	Establish standards regulating the location of critical facilities near or within known hazard areas.	1.4

Implementation Program		Corresponding Policy
8.	Review and revise as needed the City's current grading regulations.	1.8
9.	Initiate orderly and regular inspections and appropriate abatement of structural seismic safety hazards in existing buildings, structures and critical facilities within the City.	1.1 1.5
10.	Maintain the City's agreement with the consolidated Fire Protection Districts of Los Angeles for fire protection services and periodically review the adequacy of fire protection services.	1.7
11.	Maintain and improve, when necessary, present City zoning ordinance and subdivision regulations requiring Fire Department approval prior to project plan approval and completion.	1.6 1.8
12.	Adopt the current Uniform Fire Code provisions and update the codes whenever necessary.	1.7
13.	Encourage the Fire Department to provide public education programs to be conducted by qualified fire-fighting personnel and made available to all members of the community identifying potential fire hazards and appropriate responses.	4.1 4.2
14.	With the assistance of the Fire Department, encourage employees to establish training programs regarding fire prevention, control and evacuation.	4.1 4.2
15.	With the assistance of the Fire Department, ensure that adequate code provisions are in place for unobstructed areas to multiple-family units.	1.6 1.7
16.	Coordinate with the Los Angeles County Fire Department in their review of minimum fire flows and availability and distribution requirements for water in new developments.	1.6 1.7
17.	Establish procedures for prioritizing services and assistance provided by mutual aid organizations, including the Long Beach Police and Fire departments, the Los Angeles County Sheriff's Department and the California Highway Patrol.	1.9 2.1 2.2 3.1
18.	Increase community awareness of potential crime hazards through public education programs conducted by qualified law enforcement personnel for all members of the community.	2.1 4.1 4.2
19.	Encourage City residents to become active in their community by continuing to support programs, such as Neighborhood Watch Program.	2.1

	Implementation Program	Corresponding Policy
20.	Periodically review and update, as necessary, all law enforcement procedures and services to ensure the protection of public safety and welfare within Signal Hill.	2.2
21.	Periodically review and update, as necessary, the City's security ordinance.	2.1
22.	Perform regular inspections of all water storage facilities located within the City and, if necessary, implement new procedures to ensure the safety of these facilities.	1.1
23.	Collaborate with state and regional agencies in resolving problems related to treatment and disposal of Class I hazardous wastes.	1.9
24.	Periodically review and update all municipal and building codes regulating the development and maintenance of facilities that extract, process, transport and store petroleum, natural gas, chemical acid materials and other potentially hazardous or toxic material.	1.9
25.	Continue to conduct safety inspections of hazardous and toxic materials facilities and implement, as necessary, any new requirements for the regulation of safety in these facilities.	1.9
26.	Collaborate with appropriate agencies and industries to define responsibility and cost allocation for repair and cleanup of hazardous, dangerous, toxic and other spilled materials.	1.9
27.	Require the annual updating of the City's inventory of all facilities, pipelines and transport routes involved with hazard and toxic material activities.	1.9
28.	Periodically update local standards, and support strengthening of state and federal standards concerning the transportation of hazardous and toxic materials within Signal Hill.	1.9
29.	Specify those roadways that are designated as transportation routes for hazardous and toxic materials within.	1.9
30.	Develop an automatic shutoff system for petroleum facilities in the event of a potential hazard.	1.9
31.	Develop a system for the automatic dispersal of a neutralizing acid in the event of a hazardous chemical spill.	1.9
32.	Develop educational programs for public safety, public works and inspection personnel identifying the types of hazardous materials located within the City and/or proper handling procedures in the event of a hazardous or toxic material emergency.	1.9 4.1 4.2

	Implementation Program	Corresponding Policy
33.	Maintain a capability for dealing with hazardous or toxic materials emergencies; seek funding for such a capability.	1.9
34.	Maintain and revise, as necessary, the City's emergency response plan, to ensure the optimal safety and welfare of Signal Hill residents.	3.1
35.	Require regular practice of the emergency response and management plan by City personnel in a simulated setting.	3.2 3.3
36.	Develop an agreement with appropriate emergency medical service providers to serve Signal Hill's residents and workers in the event of a disaster.	3.1
37.	Maintain an evacuation plan providing routes and procedures.	3.1
38.	Develop an educational program aimed at informing the public of proper emergency response procedures.	3.2 4.1 4.2
39.	Periodically reevaluate the coordinated efforts of all emergency response agencies to ensure the availability of services and the efficiency of communication.	3.1 3.3
40.	Prepare a recovery plan for reconstruction of essential services and facilities in the event of an emergency; develop resources and available sources of funding.	3.2
41.	Adopt appropriate policies that will meet anticipated short-term needs following a major disaster.	3.2
42.	Recommend to the California Insurance Commissioner that natural disaster policy be included in the standard fire insurance form or as an item of extended coverage in standard homeowners policies.	3.1
43.	Maintain an emergency operations center in accordance with the City's Emergency Preparedness Plan.	3.1
44.	Train City employees in emergency response and management skills.	3.1

VI. GLOSSARY

DEFINITIONS: HAZARDS

Critical Facility - Includes facilities that house or serve many people or otherwise pose unusual hazards in case of damage from, or malfunction during, an earthquake, such as hospitals, fire, police and emergency service facilities; and utility "lifeline" facilities, such as water, electriCity, gas supply, sewage disposal, communications and transportation facilities.

Fault - A fracture in the earth's crust forming a boundary between rock masses that have shifted.

> **Active Fault** - A fault along which there is recurrent movement, usually indicated by small periodic displacements or seismic activity.
>
> **Potentially Active Fault** - (1) A fault that has moved within the Quaternary Period before the Holocene Epoch (the last 2,000,000 to 11,000 years); (2) a fault that, because it is judged to be capable of ground rupture or shaking, poses an unacceptable risk for a proposed structure.
>
> **Inactive Fault** - A fault that shows no evidence of movement in recent geologic time and no potential for movement in the relatively near future.
>
> **Fault Trace** - A line formed by the intersection of a fault and the earth's surface. It is the representation of a fault as depicted on a map.
>
> **Fault Zone** - A fault that is expressed as a zone of numerous small fractures of breccia or fault gouge. A fault zone may be as wide as hundreds of meters.

Fire Break - A natural or artificial barrier where plants have been removed for fire-control purposes.

Fire Hazard Severity Scale - A system of classifying and delineating wildland areas of varying potential for fire using three criteria: fuel loading (in terms of wildland plants), weather and slope.

Fire Hazard Zone - An area where, due to slope, fuel loading, weather or other fire-related conditions, the potential loss of life and property from a fire necessitates special fire protection measures and planning before development occurs.

Flood Plain - A lowland or relatively flat area adjoining inland or coastal waters that is subject to a 1 percent or greater chance of flooding in any given year (i.e., 100-year flood).

Fuel or Fire Break - A wide strip of land on which plants have been thinned, trimmed, pruned or changed to types that burn with lower intensity so that fires can be more readily put out.

Fuel Loading - The quantity of plants and other fuel per unit of land area.

Fuel Management or Fuel Modification - The use or removal of plants in the wildlands to reduce the intensity of an approaching wildfire and to increase the ability to prevent or fight fires while preserving and enhancing environmental quality.

Geotechnical Evaluation - A professional evaluation using scientific methods and engineering principles performed by a soil engineer licensed in the State of California.

Greenbelt - A strategically located, landscaped zone of variable width in which a low volume of fuel is maintained in a "green" or "live" condition throughout the year by irrigation, designed to slow or stop the spread of fire and to prevent soil erosion (e.g., golf courses, parks).

Ground Failure - A permanent differential ground movement capable of damaging or seriously endangering a structure.

Hazardous Building - A building that may be hazardous to life in the event of an earthquake because it:

1. Was constructed prior to the adoption and enforcement of local codes requiring earthquake resistant design of buildings

2. Is constructed of unreinforced masonry

3. Exhibits any one of the following characteristics:

   - Exterior parapets and ornamentation that may fall on passers-by
   - Exterior walls that are not anchored to the floors, roof, or foundation
   - Sheeting on roofs or floors incapable of withstanding lateral loads
   - Large openings in walls that may cause damage from torsional forces
   - Lack of an effective system to resist lateral forces

Hazardous Material - An injurious substance, including pesticides, herbicides, toxic metals and chemicals, liquefied natural gas, explosives, volatile chemicals and nuclear fuels.

Landslide - A general term covering a wide variety of mass-movement landforms and processes involving the downslope transport, under gravitational influence, of soil and rock material en masse.

Liquefaction - (sed) The transformation of loosely packed sediment into a fluid mass preliminary to movement of a turbidity current by subaqueous slumping or sliding.

Liquefaction - (soil) In cohesionless soil, the transformation from a solid to a liquid state as a result of increased pore pressure and reduced effective stress.

Liquefaction Slide - The rapid and often catastrophic failure of a loose mass of predominantly cohesionless material that is generated at or near full saturation. The essential mechanism of such a slide is the sudden transfer of load from the particle contacts to the pore fluid, with resultant high transient pore-fluid pressures and consequent loss of strength. Liquefaction slides usually follow upon a disturbance (e.g., by earthquake or conventional slide) and can occur both subaqueously and subaerially (Koppejan et al., 1948).

Maximum Credible Earthquake - The most severe earthquake that appears capable of occurring, based on present information, including: (a) the seismic history of the area; (b) the length of significant faults within 100 kilometers; (c) the type(s) of faults; and (d) the tectonic or structural history of the region.

Minimum Fire Flow - A rate of water flow that should be maintained to halt and reverse the spread of a fire.

Mudslide (Mudflow) - A flow of very wet rock and soil.

Noise - (See definitions in the Noise Element Guidelines.)

Potentially Hazardous Facility - Includes dams and reservoirs, nuclear reactors, tall buildings, other buildings housing many people, such as schools, prisons and hospitals, and other structures containing large quantities of potentially explosive or toxic materials.

Seiche - An earthquake-induced wave in a lake, reservoir or harbor.

Subsidence - (a) The sudden sinking or gradual downward settling of the earth's surface with little or no horizontal motion. The movement is not restricted in rate, magnitude or area involved. Subsidence may be caused by natural geologic processes, such as solution, thawing, compaction, slow crustal warping, or withdrawl of fluid lava from beneath a solid crust; or by man's activity, such as subsurface mining or the pumping of oil or ground water. Syn: land subsidence; bottom subsidence. (b) A sinking or downwarping of a large part of the earth's crust relative to its surrounding parts, such as the formation of a rift valley or the lowering of a coast due to tectonic movements. Syn: Sinking.

Surface Rupture - A break in the ground surface and associated deformation resulting from the movement of a fault.

Tsunami - A wave, commonly called a tidal wave, caused by an underwater seismic disturbance, such as sudden faulting, landslide, or volcanic activity.

Wildland - A nonurban, natural area that contains uncultivated land, timber, range, watershed, brush, or grasslands.

NOISE ELEMENT
of the
SIGNAL HILL GENERAL PLAN

City of Signal Hill

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I. INTRODUCTION

A. Purpose

The purpose of the Noise Element is to provide guidance for comprehensive local programs to control and abate excessive noise and to protect residents from adverse noise impacts. The element provides information on the existing and projected noise environment and includes goals, policies and implementation programs to ensure an acceptable noise environment. The element also identifies criteria to be used by decision makers in evaluating the noise implications of proposed projects.

B. Planning Law And Noise Element Guidelines

The State of California has mandated that each county and city prepare a noise element as part of its general plan. Section 65302(f) of the California Government Code requires that the element include the following:

> "A noise element which shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:
>
> 1. Highways and freeways.
> 2. Primary arterials and major local streets.
> 3. Passenger and freight on-line railroad operations and ground rapid transit systems.
> 4. Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
> 5. Local industrial plants, including, but not limited to, railroad classification yards.
> 6. Other ground stationary noise sources identified by local agencies as contributing to the community noise environment."

The sections in this element that follow identify and appraise the noise environment as required by the Government Code. Existing and projected noise contours (lines

that graphically depict noise exposure) are provided for the San Diego Freeway, major roadways and Long Beach Airport and are stated in terms of Community Noise Equivalent Level (CNEL). The CNEL noise contours were prepared on the basis of state-prescribed noise modeling techniques. The noise contours are used as a guide for establishing land uses that are compatible with the noise environment and that minimize noise exposure to sensitive land uses.

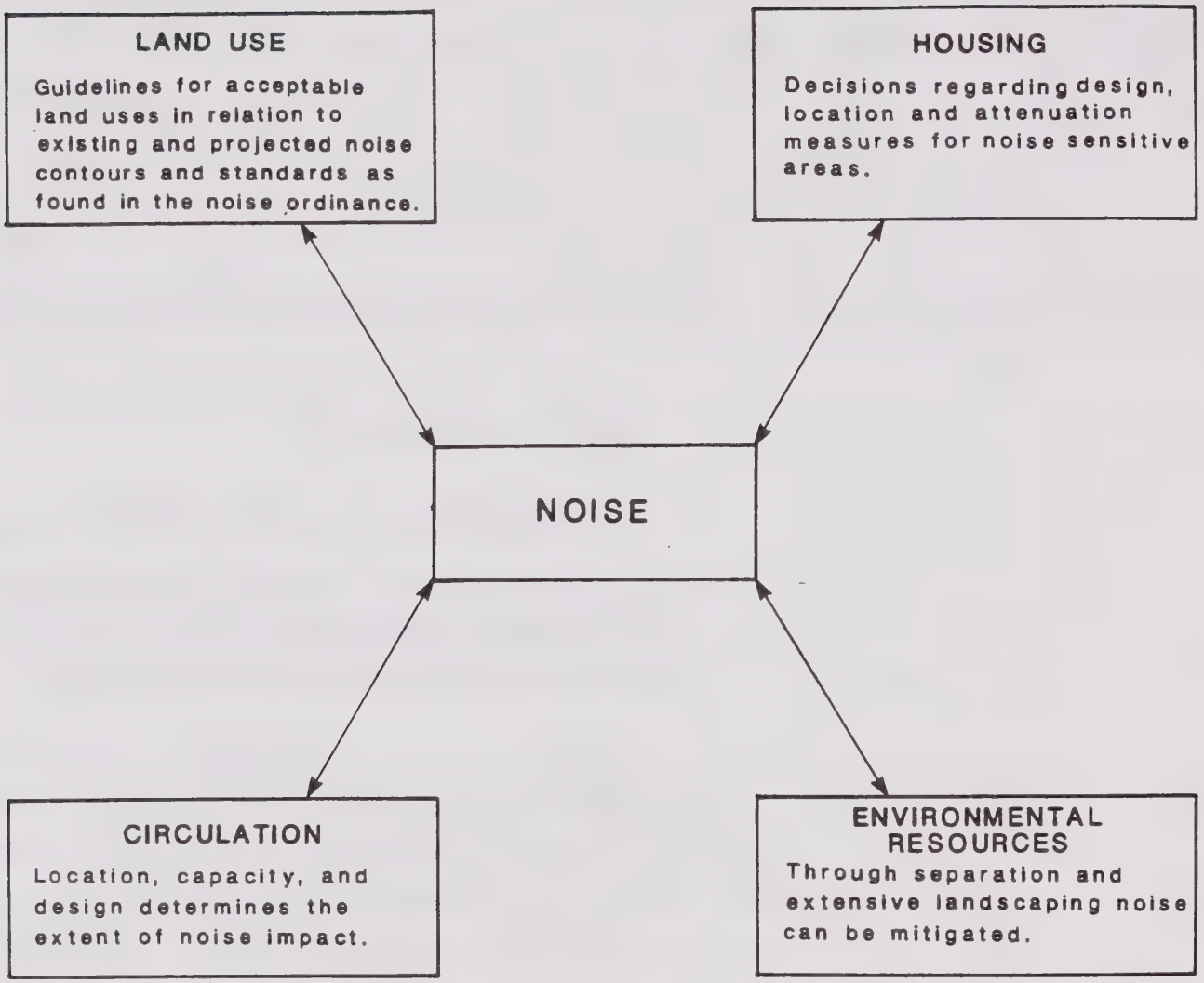
To assist the reader, definitions of terms used throughout the element are provided in Appendix A.

C. Relationship to Other Elements of the General Plan

General Plan elements provide important policy guidance to assist in decision making. All of the elements of the general plan are related and interdependent to some degree. However, the noise element is most closely related to the land use, housing, circulation, and environmental resources elements as shown in Figure 1.

The objective of the noise element is to provide guidelines to achieve noise-compatible land use. The land use and noise elements are, therefore, closely related. The noise element, by identifying noise-sensitive land uses and establishing compatibility guidelines for land use and noise, will influence the general distribution, location, and intensity of future land use. Effective land use planning can alleviate noise problems.

Residential areas are one of the most noise-sensitive land uses found in the city; therefore, the housing element is directly affected by the noise element. The housing element policies and programs should include safeguards against noise intrusion. Enforcement of land use and noise compatibility guidelines can reduce noise impacts in residential locations. In addition, effective noise insulation in housing construction can mitigate exterior-to-interior noise transmission.



Interrelatonship of Noise Element with Other General Plan Elements

CITY OF SIGNAL HILL

Michael Brandman Associates

FIGURE 1

The circulation system within a city is one of the major sources of noise. The existing and future circulation system identified in the circulation element will, therefore, greatly influence the noise environment. The circulation routes, such as the freeway, highways, and truck routes, should be located to minimize noise impact upon noise-sensitive land use. The location and design of new transportation facilities and possible mitigation of noise from existing and planned facilities will greatly influence the overall noise environment within the city.

Since noise can adversely affect the enjoyment of quiet outdoor activities, the noise element is also closely related to the Environmental Resources Element. Open spaces can be used as a noise buffer between incompatible land uses. This technique can reduce community noise impacts and also provide usable open space for recreation and visual relief.

II. BACKGROUND AND EXISTING CONDITIONS

A. Noise Characteristics

Noise is most often defined as unwanted sound. Sound levels can be easily measured, but the variability in subjective and physical response to sound complicates the analysis of its impact on people. A basic understanding of how sound is measured and described is provided below and is important to a more complete understanding of the programs identified in the Noise Element.

Sound is created when an object vibrates and radiates part of its energy as acoustic pressure or waves through a medium such as air, water or a solid. The ear receives these sound pressure waves and converts them to neurological impulses that are transmitted to the brain for interpretation. The interpretation, or perception of sound, may be different from the actual sound; loud sounds may seem quiet and quiet sounds may seem loud. Sounds may be perceived as loud, soft, noisy, quiet and high- or low-pitched. These subjective terms are all relative and do not convey technical information about the sound.

There are two parameters that are used technically to describe simple sounds:

- Amplitude — The amplitude of a sound is a measure of the pressure or force that a sound can exert. Subjectively, we say a sound is louder if it has a larger amplitude than another sound. Thus, the amplitude of sounds can be described either in measurable magnitude or in relative terms of loudness.

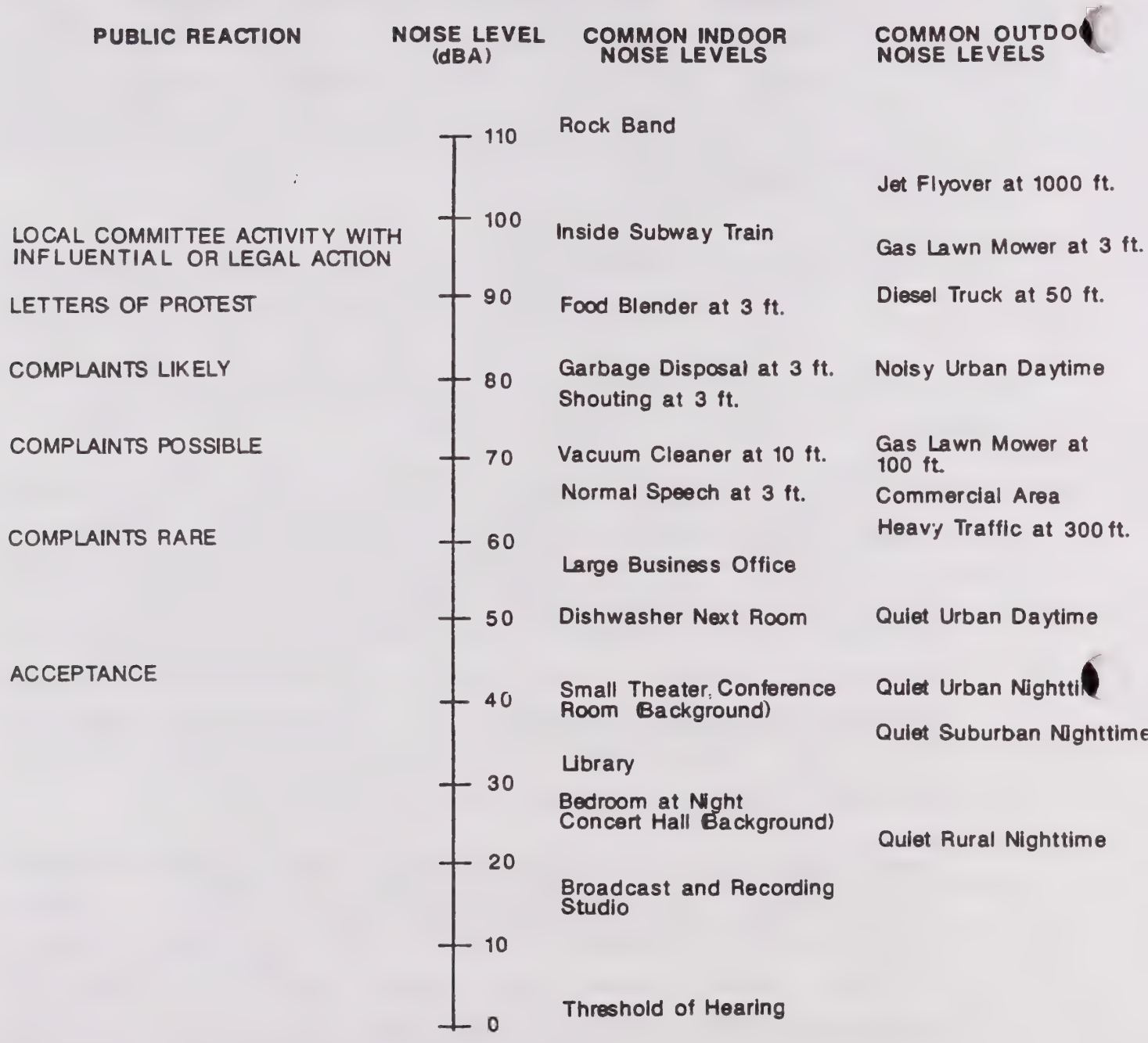
  Physically, sound pressure is measured and quantified in units of decibels (dB). The sound pressure scale is based on the logarithm of the square of the ratio of the sound pressure being measured, to a standard reference pressure that is approximately the least sound pressure that people can perceive. Zero dB means the lowest level normally audible, but does not mean zero sound pressure.

- Frequency — The unit of frequency, Hertz (Hz), means cycles per second and refers to the number of times that the acoustic pressure (amplitude) peaks for each sound. Subjectively, a sound that has more cycles per sound is higher pitched. High-pitched sounds are produced by a rapidly vibrating sound source and, conversely, low-pitched sounds are from a more slowly vibrating source.

  The human hearing system is not equally sensitive to sound at all frequencies and responds more dramatically to sounds with frequencies in the range of 20 Hz to 20,000 Hz. Twenty Hz is equivalent to 20 vibrations per second. Frequencies above 20,000 Hz or below 20 Hz are inaudible to humans and are referred to as ultrasound or infrasound, respectively.

The A-weighted decibel sound level scale has been developed to measure sound in a manner similar to the way the human hearing system responds. The use of the A-weighted scale is often indicated by using the abbreviation "dB(A)" for expressing the units of the sound level quantities. Typical A-weighted sound levels measured for various sources are provided in Figure 2. For example, conversation at 3 feet is approximately 65 dB(A) and a diesel truck at 50 feet is roughly 90 dB(A). A quiet urban daytime sound level is typically 50 dB(A). The public reaction to sound levels becomes more evident as sound levels increase. Sound levels below 50 dB(A) are generally accepted, whereas complaints are possible at 70 dB(A).

Because sound levels are in logarithmic units, they cannot be added arithmetically. Table 1 indicates a shorthand method of adding sound levels. For example, 60 dB(A) + 60 dB(A) added logarithmically, on an energy basis, equals 63 dB(A), not 120 dB(A). Hence, a doubling of sound energy produces 3 dB(A) change in the measured sound pressure level. In the same vein, 2 sounds of 60 dB(A) and 70 dB(A) would logarithmically add to 70.4 dB(A). The previously discussed 3 dB(A) change represents a doubling of sound energy, but not a doubling in loudness. Loudness is a subjective interpretation. Generally, a 3 dB(A) change is not noticeable, but a 5 to 10 dB(A) change is clearly noticeable. Due to nonlinearities in the mechanism of the human ear, a sound must be nearly 10 dB(A) higher than another to be judged twice as loud.



Source: Caltrans Noise Manual, California State Dept. of Transportation, March 1980, pg. I-1-4.

Common Noise Levels and Public Reaction

CITY OF SIGNAL HILL

FIGURE 2

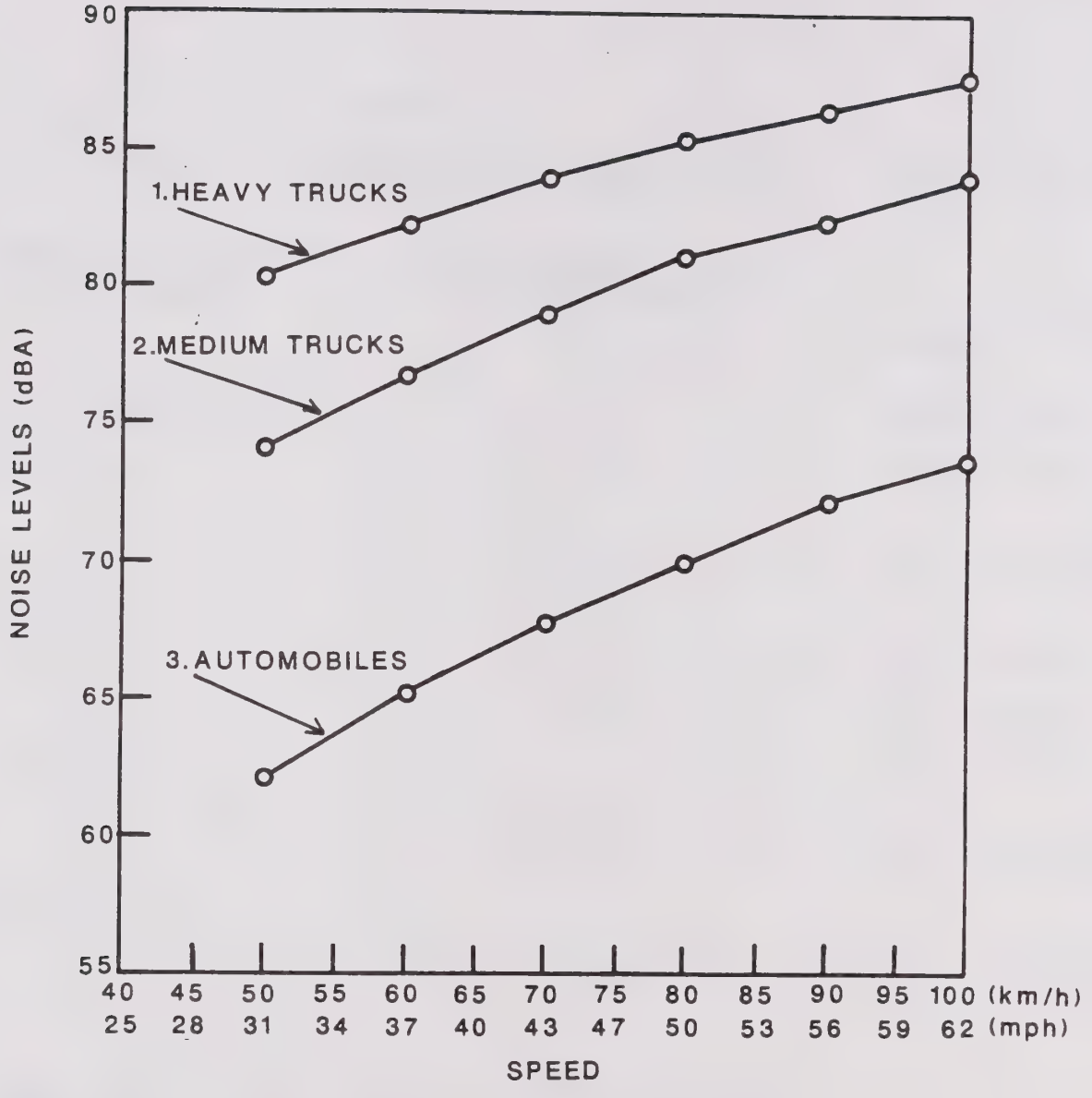
TABLE 1

DECIBEL ADDITION

Higher Noise Level Minus Lower Noise Level	Decibels To Be Added to Higher Noise Level
0	3.0
1	2.5
2	2.1
3	1.8
4	1.5
5	1.2
6	1.0
7	0.8
8	0.6
9	0.5
10	0.4
12	0.3
14	0.2
16	0.1
greater than 16	0.0

The predominant noise source in the City is roadway traffic. Figure 3 provides reference noise levels for heavy trucks, medium trucks and automobiles. Medium trucks are approximately 10 to 12 dB(A) louder than automobiles at all speeds. Heavy trucks are 4 to 6 dB(A) louder than medium trucks.

As the distance to a noise source increases, the sound level diminishes. Sound waves are attenuated by both air and ground absorption. If the sound originates from a point source (such as an air conditioning unit), the rate at which the sound attenuates is 6 dB(A) per doubling of distance. Sound from a line source (a steady stream of vehicles) diminishes at 3 dB(A) per doubling of distance. Figure 4 graphically depicts the decrease in sound level with distance.



1. AUTOMOBILES: ALL VEHICLES WITH TWO AXLES AND FOUR WHEELS .

2. MEDIUM TRUCKS: ALL VEHICLES WITH TWO AXLES AND SIX WHEELS .

3. HEAVY TRUCKS: ALL VEHICLES WITH THREE OR MORE AXLES.

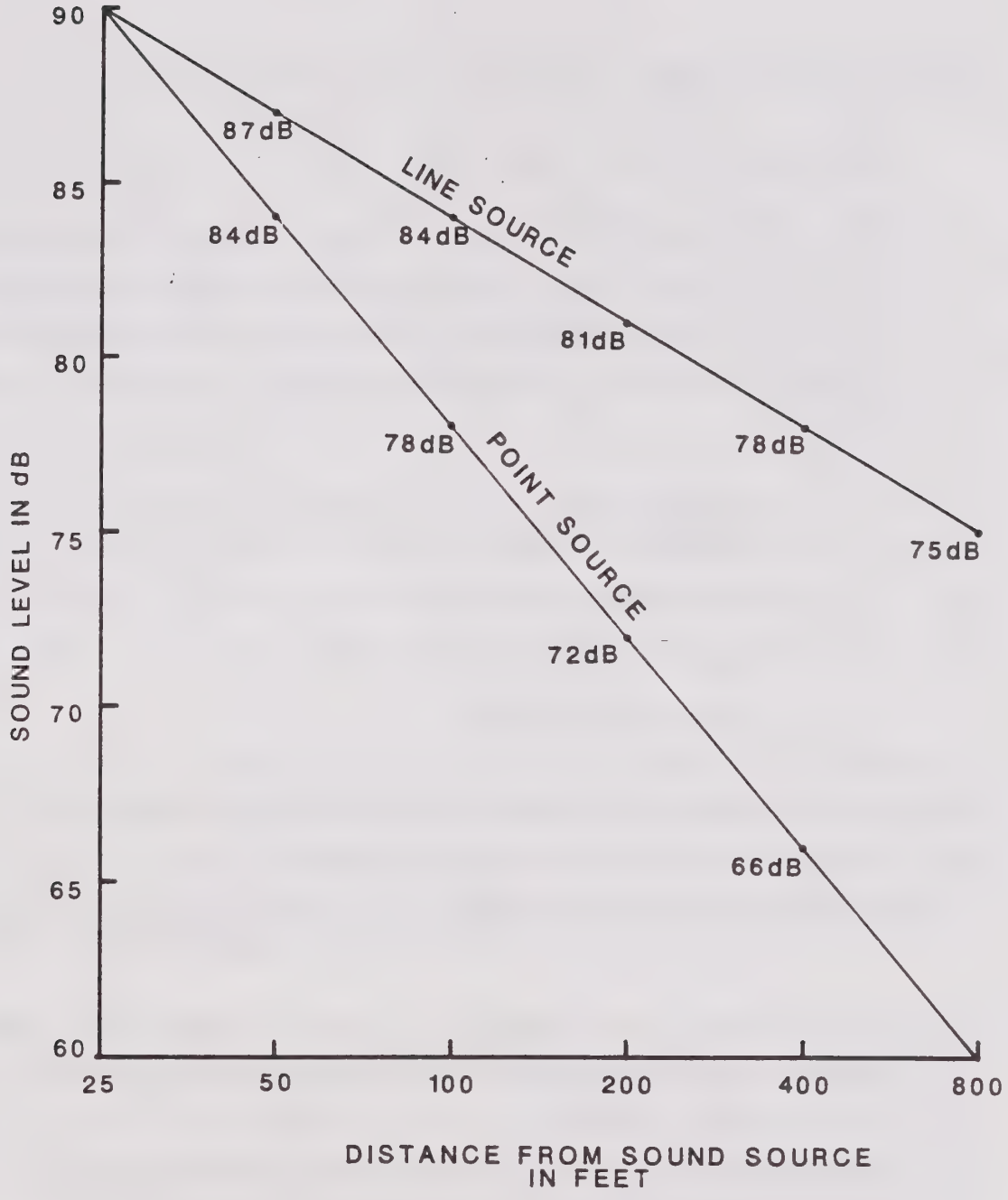
SOURCE: U.S. Dept. of Transportation, Federal Highway Admin., FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108), Dec., 1978.

Reference Noise Levels at 50 Feet as a Function of Speed

CITY OF SIGNAL HILL

Michael Brandman Associates

FIGURE 3



Sound Level Decrease with Distance

CITY OF SIGNAL HILL

FIGURE 4

B. Noise Criteria

Although the A-weighted decibel scale is often used to quantify the individual event sound level and is related to subjective response ranking, psychoacousticians (scientists specializing in the effects of noise on people) have determined that the degree of annoyance response and other effects depend on a number of factors. Some of the factors (identified by researchers over the years) that affect our perception and cause us to categorize a sound as an annoyance or, in other words, as noise are:

- Magnitude of the event sound level in relation to the background (i.e., ambient) sound level.
- Duration of the sound event.
- Frequency of occurrence of events.
- Time of day events occur.

Federal and state governments have established noise guidelines and regulations for the purpose of protecting citizens from potential hearing damage and various other adverse physiological, psychological and social effects associated with noise. These guidelines and regulations are identified below and discussed in Appendix A.

The federal government has adopted a number of standards and recommended noise criteria to protect people in both the working and home environments. The standards and criteria most applicable to the City of Signal Hill are listed below. The federal agencies involved include: Department of Labor - noise standards for the workplace; Federal Highway Administration - design noise levels for federal highway projects; Department of Housing and Urban Development - maximum noise level standards for federally assisted housing projects, and; Environmental Protection Agency - guidelines to adequately protect the public welfare. The federal government specifically preempts local control of noise emissions from aircraft, railroads and interstate highways.

The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, freeway noise affecting classrooms, noise insulation, occupational

noise control and airport noise. The state has also developed land use compatibility guidelines for community noise environments. These guidelines are stated in terms of CNEL.

CNEL provides a common measure for a variety of differing noise environments. A 65 dB CNEL level describes an area as having a time-average constant sound level of roughly 65 dB(A), even though the area would experience individual sound events higher and lower than 65 dB(A). CNEL values can be useful in comparing noise environments and indicating the potential degree of adverse noise impacts. However, the CNEL scale has limitations because it averages the sound event levels over a 24-hour period and possibly obscures the periodic high noise levels of individual events and their possible adverse effects. In recognition of this limitation, the Environmental Protection Agency (EPA) has adopted maximum single-event noise impact levels for some sources, such as buses, garbage trucks and railroad equipment.

It should be noted that CNEL is not a measure but a computation of measured sound levels. People do not "hear" CNEL, but respond to the sound levels of individual events or noise sources. People may integrate over long-term intervals (daily, weekly, etc.) their response to noise and make subjective judgments about the "quality" of the noise environment.

A review of the federal and state noise standards and guidelines as they relate to planning indicate that there should be concern at the following noise levels:

- Greater or equal to 65 dB CNEL

  Noise-sensitive land uses are normally unacceptable.

- 60 to 65 dB CNEL

  Noise-sensitive land uses are conditionally acceptable if interior noise levels can be mitigated to acceptable levels.

C. Existing Noise Environment

1. Field Noise Survey

A community noise survey was conducted in the preparation of the Noise Element to document the existing noise environment.* Noise measurements were conducted at 13 sites between the hours of 10 a.m. and 4 p.m.** The noise monitor locations are identified in Figure 5 and are representative of developed residential areas, industrial areas and areas of mixed land use. The noise measurement results are summarized in Table 2 and should be used as a guideline or indication of noise levels within the community. Figure 5 identifies noise survey locations.

TABLE 2

NOISE MEASUREMENT RESULTS BY SITE

Site No.	Lmax[1]	L_{10}[2]	L_{50}[3]	L_{90}[4]	Leq[5]
1	71	60	53	50	56.9
2	80	70	64	61	66.5
3	69	57	54	53	55.6
4	75	63	55	52	59.5
5	72	60	51	47	56.5
6	64	57	54	53	54.5
7	81	65	58	54	63.1
8	69	59	52	50	55.9
9	67	56	52	50	53.6
10	71	64	58	54	59.7
11	66	59	54	51	55.0
12	69	60	53	51	56.3
13	71	64.4	56.3	52.9	59.3
Range	648	56-70	51-64	47-61	53.6-66.5

* Field survey was conducted by Michael Brandman Associates, Inc., in September 1985.

** The noise measurement survey data forms for each location along with site photos are available for review at the Signal Hill Department of Planning and Community Development.

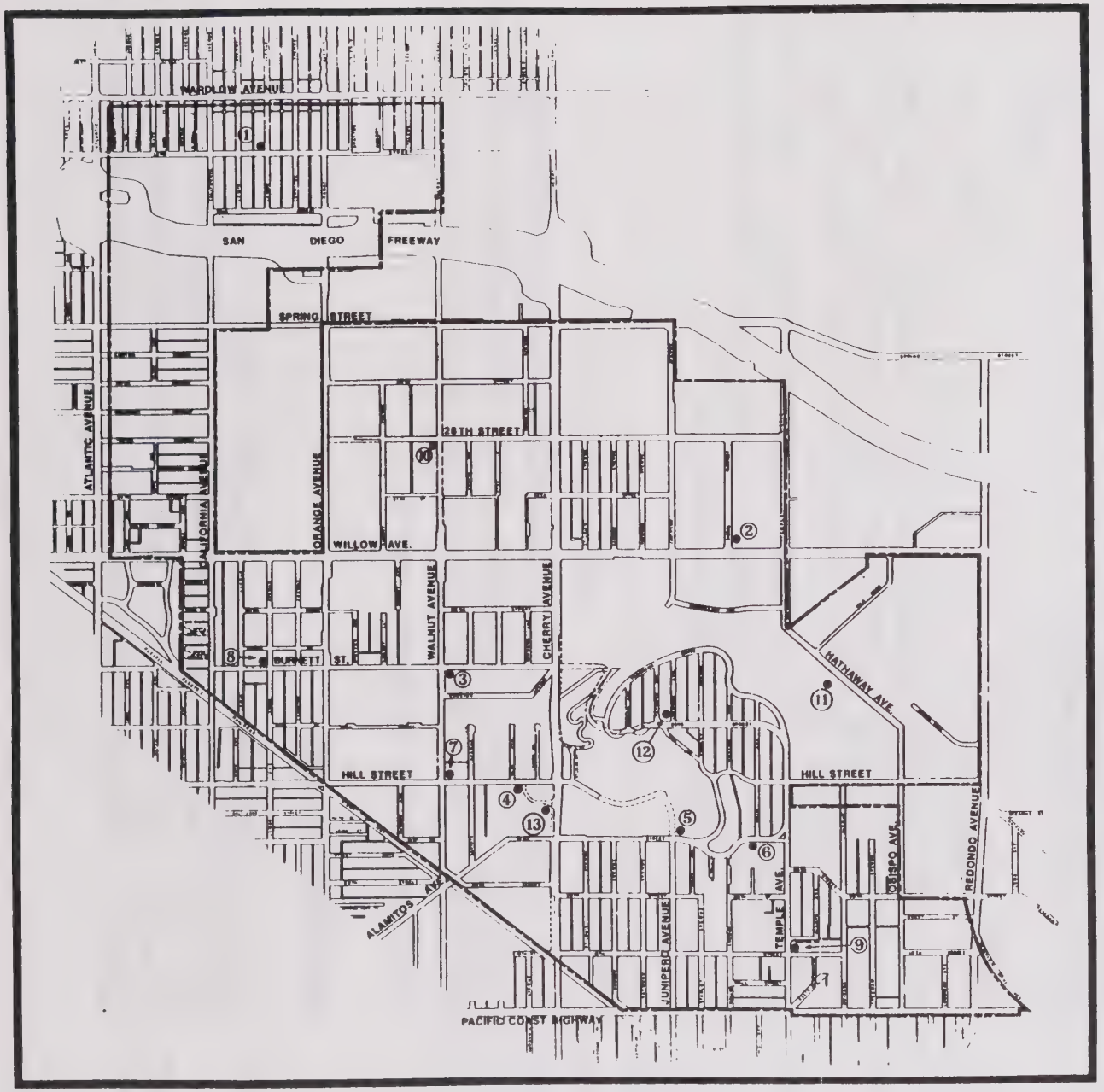
1 Lmax is the maximum sound level.

2 L_{10} is the sound level exceeded 10 percent of the noise measurement duration.

3 L_{50} is the sound level exceeded 50 percent of the noise measurement duration.

4 L_{90} is the sound level exceeded 90 percent of the noise measurement duration. It is also considered the background noise level.

5 Leq is the sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period.



NOISE MONITORING LOCATIONS

LEGEND

⊡ Noise Field Survey Location





City of Signal Hill

FIGURE 5

NOISE

Maximum noise levels measured at monitoring locations ranged from 64 to 81 dB(A). Medium and heavy trucks were the source of the higher range noise levels. L_{10} levels ranged from 56 to 70 dB(A), and again, were caused by heavy and medium trucks on adjacent roadways.

The Leq ranged from 53.6 to 66.5 dB(A) at the monitoring locations. The lower range values at sites 3, 6, 8, 9 and 11 reflect a typical suburban noise environment, and the higher range values at sites 1, 2, 4, 5, 7, 10, 12 and 13 are characteristic of an urban environment.

Three noise sources were identified through the field survey as making up the major portion of the noise environment: noise from aircraft, noise from traffic sources and noise from oil pumping machinery.

Aircraft Noise

Aircraft overflights were observed at all sites. The majority of these were single-engine propeller aircraft operating from Long Beach Municipal Airport with the remaining overflights being private and police helicopters. The noise levels of the overflights ranged from 60 to 76 dB(A) with 68 dB(A) being the most common measured level. An average of two aircraft overflights were observed during each of the 15-minute measuring periods for each location.

Traffic Noise

At all sites, traffic on nearby streets contributed significantly to the noise environment. Heavy trucks contributed to the noise environment at sites 2, 10 and 13. All sites were impacted by medium trucks. Medium and heavy trucks were the source of maximum noise levels at each site.

Oil Pumping Machinery

Oil pumping machinery was operating adjacent to sites 3, 5, 6, 9, 11 and 12. Five of these sites were in areas in which there were also single- and multiple-family residences. Measurements were taken of noise levels from three oil pumping machines. At 50 feet, the noise levels ranged from 52 to 64 dB(A); at 100 feet, 52 to

56 dB(A); and 150 feet, from below the ambient to 52 dB(A). The highest level measured was from a machine near site 9 and located within 100 feet of multifamily housing units.

In addition, noise from refineries, saws, drills and other machinery contributed to the noise environment at those sites containing industrial uses.

3. Noise Contours

Background

The noise element contains both 60 and 65 dB CNEL contours for transportation noise sources, including the San Diego Freeway, major roadways and Long Beach Airport.

The noise contours represent lines of equal noise exposure just as the lines on a weather map indicate equal temperature or atmospheric pressure. The contours provide a visualization of estimates of sound level. Land forms and man-made structures have very complex effects on sound transmission and on noise contours. Generally, barriers between a source and receiver absorb and/or reflect noise, resulting in a quieter environment. Where barriers or land forms do not interrupt the noise transmission path from source to receiver, the contours prove to be good estimates of the average noise level. In areas where barriers or land forms interrupt the sound transmission, the noise contours overestimate the extent to which a source intrudes into the community. Unfortunately, it is virtually impossible for the Noise Element to analyze each roadway segment of the city for barrier noise attenuation. Therefore, where specific projects are proposed within noise impacted areas, an acoustical analysis should be completed to evaluate the noise reduction provided by any barriers to the noise path.

Roadways

The City of Signal Hill roadway noise contours were generated with the Federal Highway Administration's Highway Traffic Noise Prediction Model, U.S. Department of Transportation (1978). This model was modified to generate CNEL values. Model input data included existing and projected average daily traffic levels; day/evening/

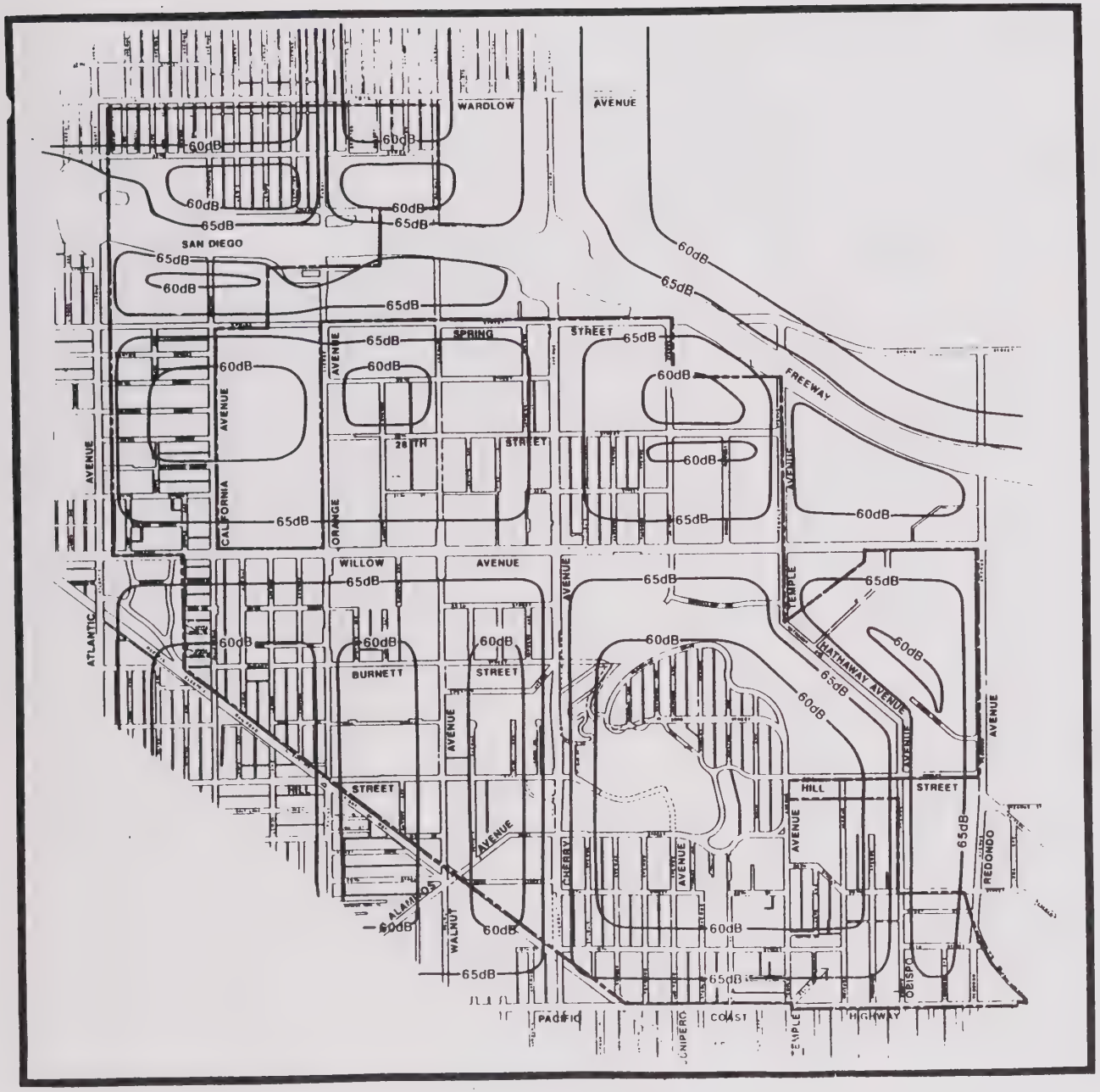
night percentages of autos, medium and heavy trucks; vehicle speeds; ground attenuation factors and roadway widths. The average daily traffic assumptions and distances to the roadway 60 and 65 dB CNEL contours for 1985 and 2000 are provided in Table 3.

Noise contours for the existing major roadway noise sources are shown in Figure 6. Both 60 and 65 dB CNEL contours are provided for the San Diego Freeway and primary and secondary roadway. The noise contours represent unmitigated conditions, except the San Diego Freeway where elevated and depressed terrain were considered. Therefore, on roadways where walls, berms, or structures block the noise path, the contours over estimate the noise impact.

Long Beach Municipal Airport

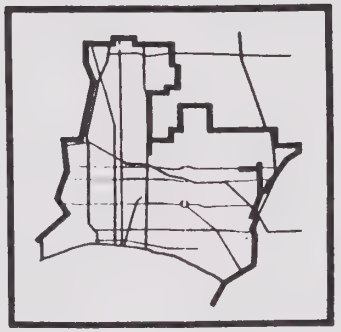
The Long Beach Municipal Airport is located to the northeast of Signal Hill and is owned and operated by the City of Long Beach. The airport operations are summarized in Table 4. Over 94 percent of the operations are general aviation, which is predominantly single-engine propeller aircraft. However, this total also includes some business jet activity, approximately 15 departures per day.

YEAR 2000–CNEL NOISE CONTOURS



LEGEND

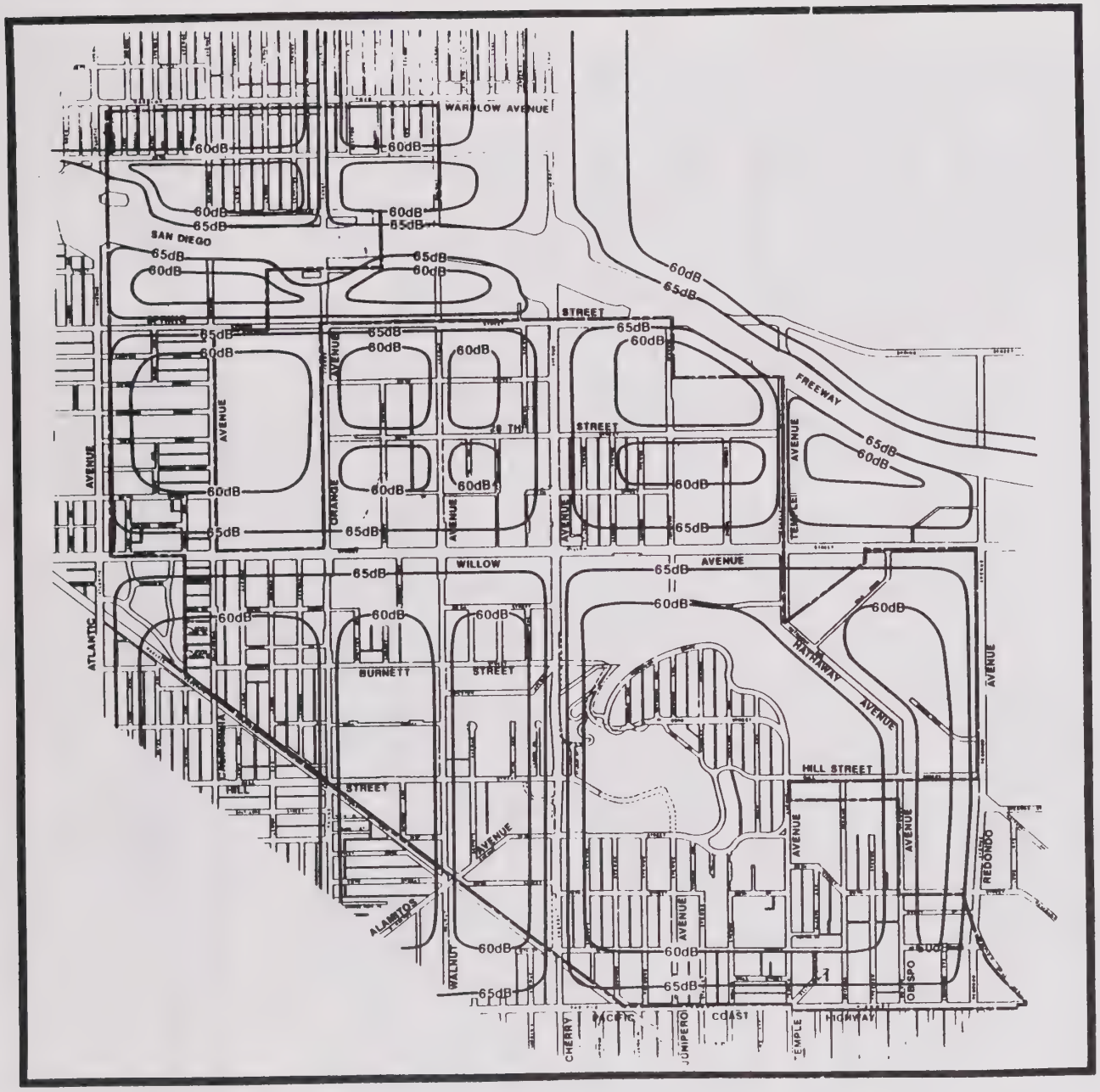
Future dB CNEL Noise Contour



0 600 1200 1800

City of Signal Hill

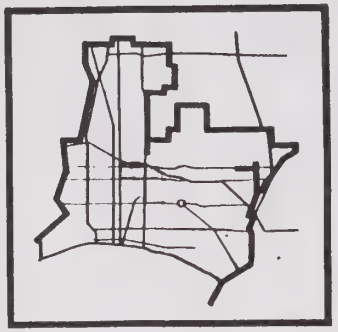
FIGURE 8 NOISE



YEAR 1985–CNEL NOISE CONTOURS

LEGEND

Existing dB CNEL Noise Contour





City of Signal Hill

FIGURE 6 NOISE

TABLE 3

1985 AND 2000 DAILY TRAFFIC AND dB CNEL CONTOURS BY ROADWAY

Roadway	Average Daily Traffic 1985	Average Daily Traffic 2000	Distance in Feet to dB CNEL Contour[1] 1985 60 dB	1985 65 dB	2000 60 dB	2000 65 dB
Atlantic Avenue						
Willow St. to Wardlow Rd.	21,300	29,300	387	125	531	170
California Avenue						
South City Limits to Wardlow	4,600	4,975	61	50	57	50
Cherry Avenue						
Pacific Coast Hwy to Willow St.	17,200	23,633	313	102	429	138
Cherry Avenue						
Willow St. to Spring St.	27,000	39,400	671	213	479	310
Spring St. to Wardlow Rd.	34,800	44,700	865	274	1,111	352
Hathaway Avenue						
Willow St. to Hill St.	8,520	21,900	212	69	544	173
Obispo Avenue						
Hill St. to South City Limits	7,200	17,300	180	59	430	137
Orange Avenue						
Pacific Coast Hwy to Hill St.	9,600	10,000	124	50	128	50
Hill St. to Spring St.	9,200	11,450	192	65	237	77
Spring St. to Wardlow Rd.	12,260	14,200	223	73	258	83
Pacific Coast Highway						
Orange Ave. to Redondo Ave.	9,200	11,450	192	65	237	77
Redondo Avenue						
Pacific Coast Hwy to Hwy 405	18,230	29,550	453	145	734	233
Spring Street						
Atlantic Ave. to Walnut Ave.	10,750	17,500	268	88	435	139
Walnut Ave. to Junipero Ave.	20,550	27,000	511	163	671	213
Temple Avenue						
Willow St. to Spring St.	9,840	10,800	245	79	269	87
Walnut Avenue						
South City Limits to Spring St.	6,730	6,000	108	50	69	50
Spring St. to Wardlow Rd.	4,195	6,200	56	50	69	50
Willow Street						
Atlantic Ave. to Redondo Ave.	29,800	43,514	741	235	1,081	343
28th Street						
Cherry Ave. to Temple Ave.	4,930	6,350	91	9,150	101	50
33rd Street						
Atlantic Ave. to California Ave.	7,610	8,200	98	50	91	50
405 Freeway						
Atlantic Ave. to Redondo Ave.	234,000	260,000	385	215	225	400

1 The distances are from roadway centerline and do not assume any reduction from noise barriers.

TABLE 4

LONG BEACH MUNICIPAL AIRPORT OPERATIONS FOR FISCAL YEAR 1984 (DEPARTURES AND ARRIVALS)

Category	Annual	Daily	Percentage
General Aviation	424,748	1,163	94.2
Air Taxi	15,751	43	3.5
Air Carrier	8,328	23	1.8
Military	2,104	6	0.5
Total	450,931	1,235	100.00

The 60 and 65 dB CNEL for 1984 aircraft operations at Long Beach Municipal Airport are shown in Figure 7. Neither contour extends to any portion of the City of Signal Hill.

The airport has five runways. Air carrier flights are predominantly conducted on Runway 30-12. The orientation of this runway confines the noise impacts from these aircraft to areas within the City of Long Beach. The use of Runway 25L-7R causes the greatest noise impact to Signal Hill. Runway 25L-7R is roughly parallel to Spring Street and departures east to west from this runway place aircraft directly over the northeastern portion of the city. Runway 25L-7R is used approximately 30 percent of the time. However, because of its 5,420-foot length, almost all of these operations are by single- and twin-engine propeller aircraft and not air carrier, air taxi or business jet aircraft. Touch and go operations commonly occur on runway 25L-7R and place aircraft in a circular pattern flying west to east over Signal Hill. Landing west to east on Runway 7R-25L would also place aircraft over the northeast portion of Signal Hill; however, this type of operation occurs less than 2 percent of the time. Although growth at the airport may increase the number of aircraft operating on Runway 25L-7R, larger and noiser aircraft types could not operate without strengthening and resurfacing the runway to support the greater aircraft weights. A runway extension would also be required to meet Federal Aviation Administration standards for some aircraft.

The City of Long Beach has adopted both noise abatement procedures (see Appendix B) and aircraft noise control regulations (see Chapter 8.84 of the City of Long Beach Municipal Code). The applicable sections for Signal Hill include:

- Touch and go, stop and go and low approach operations are allowed on the east-west runways only between 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. to 3 p.m., weekends and holidays.
- Runway 25L, 16L/34R and 16R/34L are closed between the hours of 10 p.m. and 7 a.m.
- No departures are permitted on Runway 7R between the hours of 10 p.m. and 7 a.m.
- No formation takeoffs or landings are permitted.
- Runway 25L/7R noise limit—an SENEL[1] of 90 dB as measured at monitoring stations 1, 2, 5 and 6 or an equivalent EPNdB noise level.

Petroleum Industry

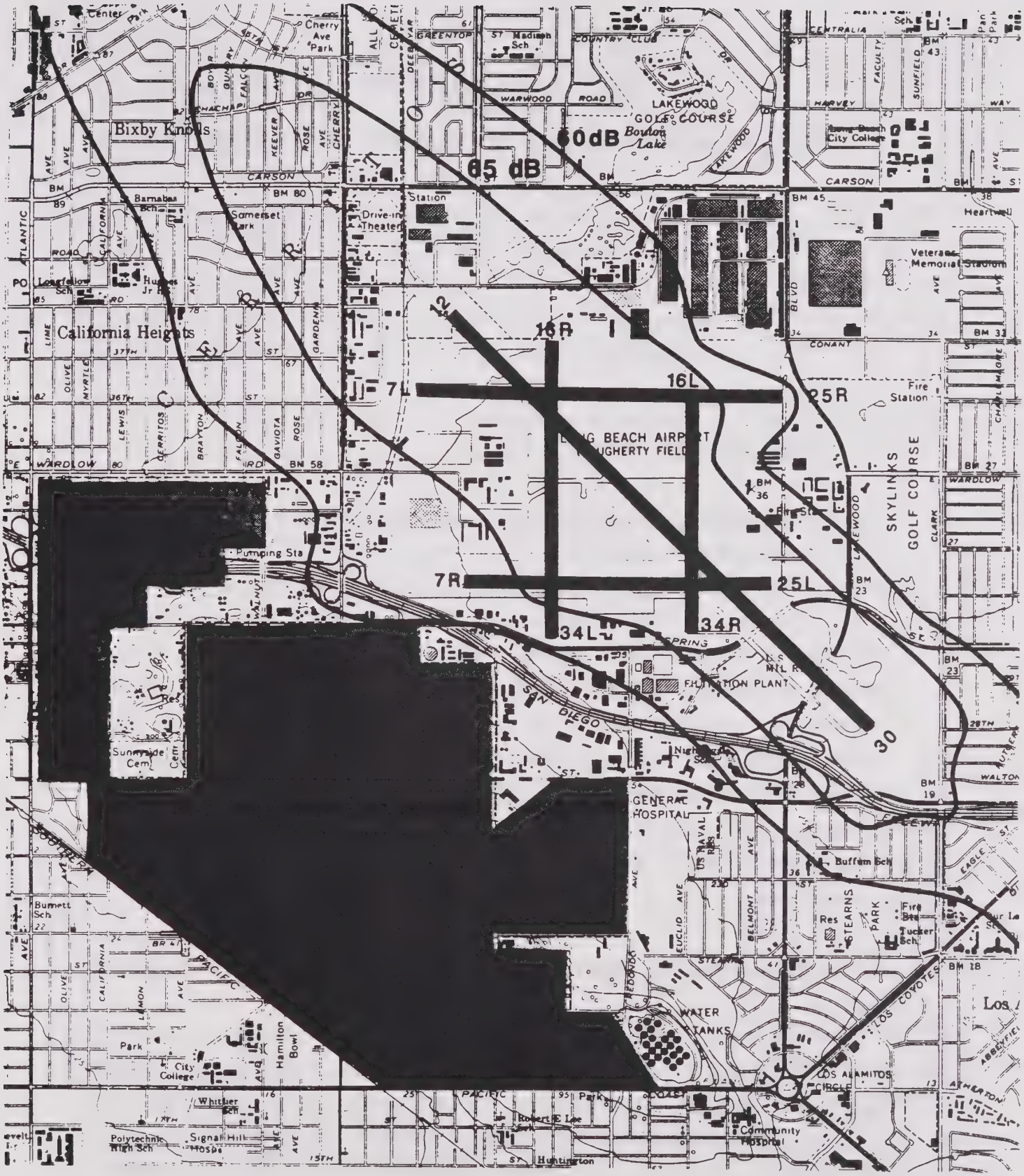
Drilling rigs, pumping units and refinery operations are located throughout the city. Noise levels from these sources vary depending on the type and maintenance of the equipment involved. The field noise survey measured 6 oil pumping rigs with noise levels ranging from 52 to 56 dB(A) at 100 feet. Fortunately, most of the petroleum industry operations are located sufficient distances from noise sensitive land uses; however, over the years, noise-sensitive land uses have been constructed near pre-existing oil operations.

Population Exposure

The estimated population within each CNEL zone is provided in Table 5. There are approximately 220 residents within the city exposed to noise levels exceeding 65 dB CNEL. All these residents are located along major roadways throughout the city. An additional 690 residents live within the 60-65 dB CNEL. The San Diego Freeway impacts approximately 25 residents in the 60 to 65 dB CNEL. All these residents live in the northeastern portion of the city between the freeway and 32nd Street.

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1 Refer to Appendix A for definitions.



Long Beach Airport
1984 CNEL Contours
CITY OF SIGNAL HILL

N.22

FIGURE 7

TABLE 5

1985 POPULATION IMPACTED BY TRANSPORTATION NOISE SOURCES[1]

Source	60 to 65 dB CNEL	65+ dB CNEL	Total
San Diego Freeway	25	0	25
Major Roadways	690	225	915
Total	715	225	940

D. Future Noise Environment

Noise contours for the year 2000 are depicted in Figure 8. The contours reflect projected increases in roadway traffic volumes. Future airport noise contours were unavailable. However, without a shift to larger and noisier aircraft on Runway 25L-7R, the 60 dB CNEL contour would not extend into the city. The population impacted by the San Diego Freeway and major roadways is shown in Table 6. The number of people within the 65 dB CNEL and greater contours increases by 146 percent when compared to existing conditions. This is a result of both increases in traffic volume and increased urbanization within the city. The number of people impacted within the 60 to 65 dB CNEL also increases significantly. These projected increases in population impacted by transportation sources serve to highlight the importance of comprehensive land use planning.

TABLE 6

2000 POPULATION IMPACTED BY TRANSPORTATION NOISE SOURCE[2]

Source	60 to 65 dB CNEL	65+ dB CNEL	Total
San Diego Freeway	105	20	125
Major Roadways	2,930	555	3,485
Total	3,035	575	3,619

1 Based on existing land uses.
2 Based on future land uses.

III. NEEDS, ISSUES AND CONSTRAINTS

A. Needs

The residents of the City of Signal Hill are exposed to vehicle noise from the San Diego Freeway and major roadways, aircraft noise from Long Beach Municipal Airport operations, industrial noise from petroleum activities, and various other noise from commercial/industrial activites and construction noise. Some of the needs for effective Noise Element programs are listed below.

- To provide information concerning the community noise environment so that noise may be effectively considered in the land use planning process.
- To develop strategies for abatement of excessive noise impacts.
- To promote increased awareness of the effects of noise and ways to reduce noise impacts.

B. Issues

The issues of noise impacts and its effects on people are summarized in Table 7. The most critical concern is, of course, hearing loss. Other issues of noise exposure are concerned with speech interference, annoyance, community reaction and community attitude. Although there is no health hazard within the City of Signal Hill, the existing and future noise contours for the city identify areas where outdoor speech interference can occur and a small percentage of the population will be highly annoyed.

A community survey was conducted by the City of Signal Hill on August 8, 1985, to identify community issues. The majority of respondents ranked noise as sixth out of ten potential problems in Signal Hill. Trucks, autos and oil production were cited as the most disturbing to residents at home, with oil production more disturbing during the day and traffic more disturbing at night. Most respondents cited aircraft and traffic as the most annoying noise source experience outside the home.

TABLE 7

EFFECTS OF NOISE ON PEOPLE (RESIDENTIAL LAND USES)

Effects[1]	60 dB CNEL	65 dB CNEL
Hearing Loss	Will not occur	Will not occur
Speech Interference		
Outdoor (distance for 95% sentence intelligibility)	2.0 meters	1.5 meters
Indoor (sentence intelligibility)	100%	100%
Highly Annoyed[2]	9%	15%
Average Community Reaction[3]	Moderate	Significant
General Community Attitude Towards Area	No more important than various other environmental factors.	Adverse aspect of the community environmental factors.

Note: Research implicates noise as a factor producing stress-related health effects such as heart disease, high blood pressure and stroke, ulcers and other digestive disorders. The relationships between noise and these effects, however, have not as yet been quantified.

Source: U.S. Department of Transportation, Federal Interagency Committee on Urban Noise, Guidelines for Considering Noise in Land Use Planning Control, page D-2, June 1980.

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1 "Speech Interference" data are drawn from the following tables in EPA's "Levels Document": Table 3, Fig. D-1, Fig. D-2, Fig. D-3. All other data from National Academy of Science 1977 report "Guidelines for Preparing Environmental Impact Statements on Noise, Report of Working Group 69 on Evaluation of Environmental Impact of Noise."

2 Depends on attitudes and other factors. A small percentage of people will report being "highly annoyed" even in the quietest surroundings.

3 Attitudes or other non-acoustic factors can modify this. Noise at low levels can still be an important problem, particularly when it intrudes into a quiet environment.

The major noise sources for those working and living within the City of Signal Hill are highlighted in Table 8. The sources were identified during the noise measurement survey, development of the noise contours, and from discussions with City staff.

TABLE 8

NOISE IMPACTS BY SOURCE

Source	Impacts
San Diego Freeway	The depressed portions of the freeway substantially mitigate CNEL noise levels.
Major Roadways	Noise-sensitive land uses along major roadways are impacted by traffic noise exceeding 60 and 65 dB CNEL.
Long Beach Municipal Airport	Aircraft 60 dB CNEL noise contours do not extend into the City; however, aircraft departures over Signal Hill and aircraft in the touch-and-go traffic pattern can be annoying.
Petroleum Industry	Noise from drilling rigs, pumping units and refinery operations, although not a health hazard, has become a greater concern as urbanization occurs within the city.
Commercial/Industrial	In general, commercial/industrial operations and activities are not considered a citywide noise problem. Isolated noise problems can occur where commercial/industrial uses are located near a noise-sensitive land use.
Construction	Construction noise can be annoying to adjacent noise-sensitive land uses; however, construction noise is typically limited to two- to three-month durations during daytime hours.

C. Constraints

The constraints upon comprehensive noise control within the City are both financial and jurisdictional. Since the City does not have the financial resources to support an acoustical engineer on staff, the city role is primarily in a review capacity and the City is unable to conduct noise monitoring of noise complaints or spot checks of noise problem areas.

The Signal Hill Municipal Code requires issuance of a conditional use permit in order to drill new oil wells. A conditional use permit contains measures to minimize disturbances to residents. Unfortunately, conditions were not applied to those existing oil wells that predate conditional use permit regulations. In addition, although the servicing operation and redrilling of existing oil wells is prohibited by Municipal Code between the hours of 7:00 p.m. and 7:00 a.m., these activities are exempt from any noise limitation during the daytime.

Signal Hill is also constrained in its control of aircraft noise. The Long Beach Municipal Airport is controlled by the City of Long Beach and by the Federal Aviation Administration.

IV. GOAL AND POLICIES

Signal Hill has developed goals and policies in response to community needs related to noise, as discussed in preceding sections. Goals are defined as an ultimate state, which the city will strive to reach. Policies are statements of direction for the city to achieve those goals. Together, the goals and policies provide the city with a guiding framework to accomplish the needs while recognizing the constraints that are beyond the city to overcome. The noise principles on which the goal and policies are based are highlighted below:

- Noise can cause physical and psychological damage to people.
- Sound levels decrease with distance from the noise source.
- Noise can be reflected, scattered and absorbed by barriers to the sound transmission path.
- Effective construction methods can substantially reduce exterior to interior noise intrusion.
- It is the City's responsibility to impose land use controls to protect the general public from adverse noise impacts.

The goal and policies are based on these principles and are designed to resolve or mitigate existing and potential noise problems.

GOAL

Protect the health, safety and general welfare of people living and working within the City from adverse noise impacts.

POLICY 1

The City will consider the severity of noise exposure in the community planning process to prevent or minimize noise impacts to existing and proposed land uses.

POLICY 2

Noise-compatible commercial and industrial land uses will be planned along the San Diego Freeway and major roadways.

POLICY 3

Noise-sensitive land uses, including residents, transient lodging, hospitals and long-term medical care facilities, educational facilities, libraries, churches and places of public assembly will not be located near major stationary noise sources.

POLICY 4

The City will inform those living and working within the City of the effects of noise pollution and will cooperate with all levels of government to reduce or minimize noise impacts.

V. IMPLEMENTATION - STRATEGY AND PROGRAM

The following programs are action statements to implement the framework established in the goals and policies. Programs, generally, are the most definitive means for accomplishing community needs, since they are, where possible, quantitative guides for the management of noise in the city. The implementation programs have been divided into general programs, transportation programs, programs dealing with new noise sources and programs for areas exposed to existing or proposed transportation or stationary noise sources.

General

	Implementation Program	Corresponding Policy
1.	Provide information to the public regarding the effects of high noise levels and means to reduce noise levels and their impacts.	4
2.	Utilize site plan review process and California Environmental Quality Act in review of development projects to minimize impacts of noise-generating activities whenever feasible and implement noise mitigation measures discussed in Chapter VII.	1
3.	Review City functions and activities to make sure that noise from construction, refuse collection, and street cleaning is reduced to the lowest possible level.	4
4.	Consider the use of noise criteria in the purchase of new equipment by City departments and agencies as part of bid evaluation.	4
5.	Encourage the federal and state governments to continue to provide standards of allowable industrial noise exposure so that all workers are adequately protected against noise-induced hearing loss.	4
6.	Review City's noise ordinance and recommend amendments as needed, including Preparation and adoption of revised drilling and operational standards as part of the City's Oil Code that will enhance the interface oil production activities with urban uses and minimize noise impacts.	1

Implementation Program	Corresponding Policy
7. Consider the review and update if necessary of the Noise Element at least every five years.	4
Transportation	
8. Continue to review county and regional plans for transportation, airport operation, etc. to identify the environmental impact of noise and to develop alternatives for the control of major noise sources on a county and regional basis.	4
9. Work closely with the State Department of Transportation in the early stages of freeway routing and design modification to ensure proper consideration of noise impact on the city.	4
10. Establish guidelines for incorporating source noise reduction, barriers, and other design elements for future freeway ramp or access alignments.	4
11. Continue enforcement procedures to effect compliance with noise standards for motor vehicles.	4
12. Review and enforce the City's truck routes to prohibit through traffic in noise-sensitive areas.	1
13. Support the currently adopted Aircraft Noise Control Regulations (Chapter 8.84) and Noise Abatement Procedures for Long Beach Municipal Airport. Strongly oppose the establishment of flight patterns of aircraft over the City and relocation of runways, which would include noise impacts on land uses in Signal Hill.	4
14. Encourage the Long Beach Transit Company to use noise criteria as an important factor in their purchase of new buses.	4
New Noise Sources	
15. Mitigate new noise sources to an acceptable exterior level of 65 dB CNEL or less at existing noise-sensitive land uses.	1
16. Require an acoustical analysis report where a new noise source will introduce exterior noise levels exceeding 60 dB CNEL at a noise-sensitive location. The report must show how noise mitigation measures have been incorporated into the design to reduce interior noise levels to 45 dB CNEL.	1

Implementation Program	Corresponding Policy
Areas Exposed to Existing Transportation or Stationary Noise Sources	
17. Prohibit noise-sensitive land uses within an exterior noise level of 65 dB CNEL or higher unless noise mitigation measures, such as walls or earth berms, have been incorporated into the design of the project to reduce the noise levels to less than 65 dB CNEL at all exterior living space including single-family yards and multi-family patios, balconies, pool areas, cook-out areas and recreation areas.	2,3
18. Require an acoustical analysis report showing the ability to meet state noise insulation standards for all residential developments within a 65 dB CNEL or higher.	2,3
19. Enforce the California Noise Insulation Standards (Title 25 California Administrative Code) for multi-family dwellings to ensure an acceptable interior noise level of 45 dB CNEL in habitable rooms and to maintain adequate noise insulation.	2,3
20. Require mitigation of interior noise levels at nonresidential noise-sensitive land uses to 45 dB CNEL or less.	2,3

VI. ENFORCEMENT

Noise control programs involve federal, state, county and city agencies. The federal and state noise control responsibilities are highlighted in Appendix A. The County of Los Angeles Animal Control Department is responsible for the abatement of barking dog noise.

The enforcement of the various city regulations and guidelines are the responsibility of the Planning and Community Development Department and the Police Department. The Planning and Community Development Department should enforce the existing zoning and subdivision ordinances and incorporate the goal, policies and implementation programs of the Noise Element into the planning process.

The City of Signal Hill can achieve a noise-compatible environment through comprehensive land use planning. Proposed developments are evaluated in terms of the projected impact from future noise sources and the application of the City's policies and programs. The City's noise compatibility objectives by land use are summarized in Table 9. Proposed residential and other noise-sensitive projects impacted by a 65 dB CNEL or greater would require additional acoustical analysis to achieve acceptable interior and exterior noise levels. Noise-sensitive land uses include residential (single- and multi-family dwellings, mobile home parks, dormitories and similar uses); transient lodging (including hotels, motels and similar uses); hospitals, nursing homes, convalescent hospitals and other facilities for long-term medical care; and public or private educational facilities, libraries, churches and places of public assembly. Acoustical analyses shall be prepared by a qualified acoustical engineer with experience in environmental noise assessment and noise control design and submitted to the Planning and Community Development Department.

TABLE 9

NOISE COMPATIBILITY CRITERIA BY LAND USE

Land Use	Compatibility Criteria
Residential:	
Exterior	Outdoor living areas must be mitigated to 65 dB CNEL or less.
Interior	Habitable rooms must be mitigated to 45 dB CNEL or less.
Noise Sensitive Use:	
Exterior	Same as residential criteria.
Interior	Same as residential criteria.
Commercial:	
Exterior	A noise level of 65 dB CNEL or less or that does not interfere with normal business activity.
Industrial:	
Exterior	A noise level of 70 dB CNEL or less or that does not interfere with normal business activity.
	Public access areas should be 65 dB CNEL or less.

For the City to achieve noise and land use compatibility, it is imperative that mitigation measures and/or restrictions be imposed on future noise-sensitive developments proposed within 65 dB CNEL contours from transportation sources. In addition, noise-sensitive developments proposed near existing stationary noise sources generating noise levels exceeding 65 dB CNEL should also be reviewed. The submittal of an acoustical analysis report to the Planning and Community Development Department is the mechanism to evaluate proposed projects. The incorporation of mitigation measures as described in Part VII and other actions may enable a project to comply with exterior and interior noise compatibility criteria. However, the Planning and Community Development Department should evaluate each project individually.

The Department of Building and Safety should continue to enforce the state noise insulation standards found in California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4 as amended through June 16, 1979. This department is also

responsible for enforcing the noise ordinance. The noise ordinance is directed at controlling noise from stationary sources and its intrusion onto adjacent properties. The enforcement of the noise ordinance is an effective tool to control non-transportation noise sources.

A viable and responsive program of noise attenuation by the City of Signal Hill will be the result of a continuing program of reviewing and updating the Noise Element to ensure its meeting the needs of the City for a quieter environment.

However, the City does not have, nor does it intend to take on, the financial commitment of providing an acoustical engineer on staff or contracting for acoustical services. In order to minimize the cost of enforcement borne by the general taxpayers, certain limitations are incorporated into the noise ordinance. Specifically, unless a noise complaint is considered a public nuisance in accordance with Chapter 9 of the Signal Hill Municipal Code, where a complaint as to noncompliance with a noise ordinance requires a field test to resolve the complaint, the complainant must post a bond or adequate funds in escrow for the cost of said testing. Such costs are chargeable to the complainant when such field tests indicate compliance with the noise ordinance. If tests show noncompliance, testing costs are borne by the property owner of record on whose property the noncompliance exists.

The Police Department has the responsibility for enforcing state and federal noise laws for mobile sources (excluding aircraft) as well as the handling of normal nuisance complaints (e.g., loud parties, public gatherings).

VII. NOISE MITIGATION

Noise control is a function of the noise source, transmission path and receiver as shown in Figure 9. The arcs represent the transmission path, with the wall and residence decreasing noise transmission. The most effective noise control actions are a combination of reducing the noise at the source, lengthening or interrupting the noise transmission path and locating noise-sensitive land uses away from noise sources.

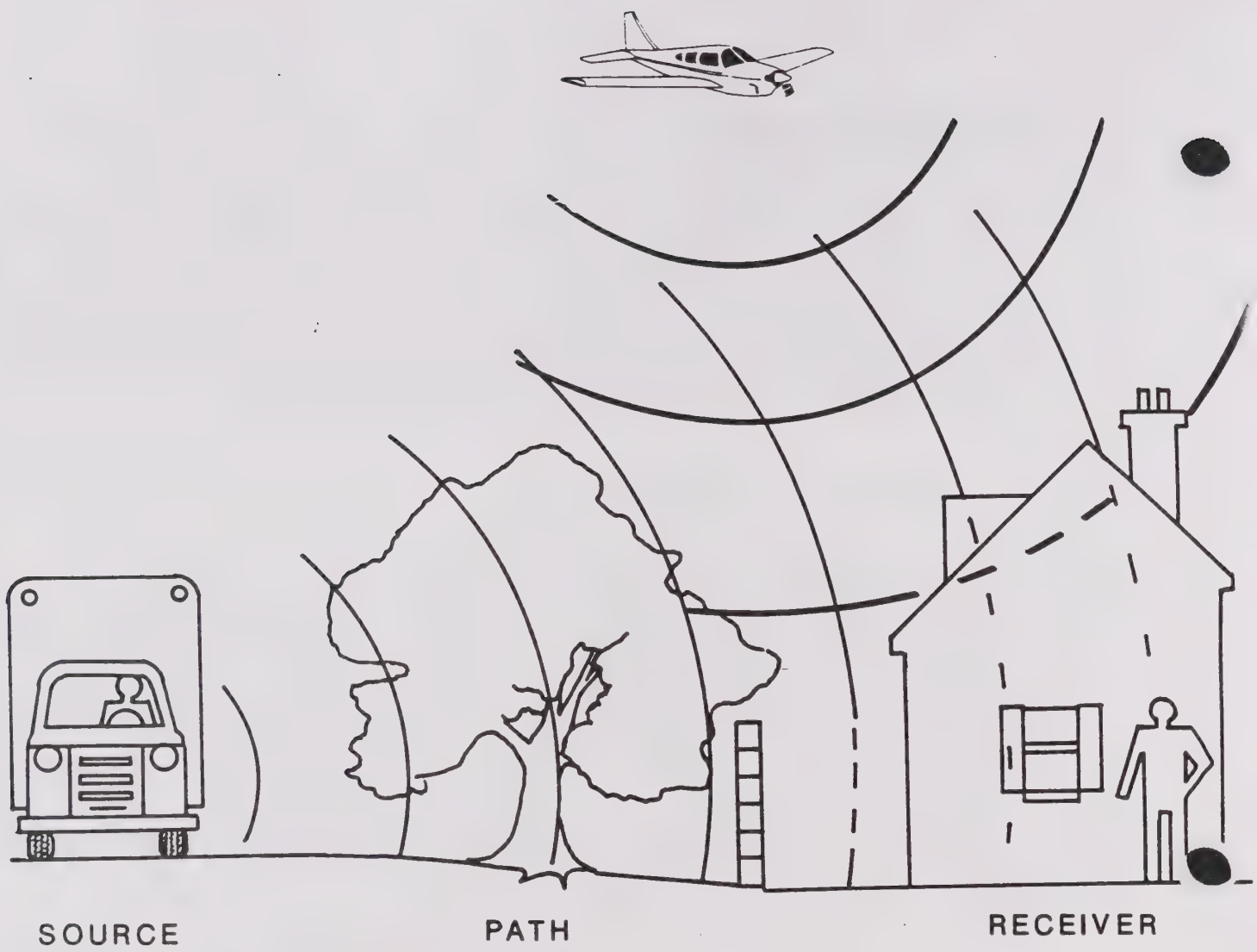
A. Noise Control At The Source

Vehicular traffic on the San Diego Freeway and on major roadways is one of the major noise sources within the city. As discussed previously, the California Vehicle Code contains noise limits applicable to new vehicles at the time of manufacture and noise regulations pertaining to the operation of all vehicles on public roads. Possible actions by the City to minimize noise at the source include reducing vehicle speeds, continued enforcement of truck routes and regulating traffic flow. Machinery noise also can be annoying to adjacent noise-sensitive land uses. Figure 10 identifies possible noise-mitigating actions at a noise source.

Commercial and industrial uses could become major noise sources in the future. Effective site planning and layout can minimize noise transmission to nearby receptors. Traffic access points, loading areas and noise-generating machinery should all be located away from noise-sensitive areas or mitigated.

1. Oil Industry

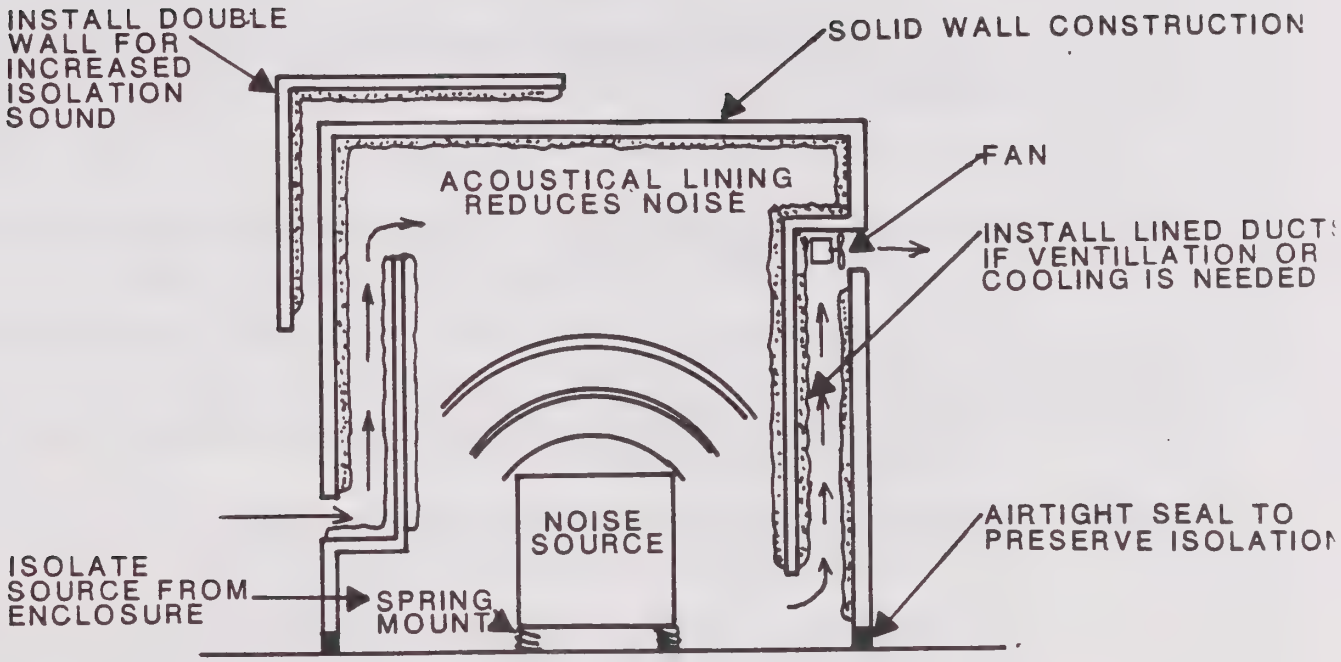
As urbanization continues throughout the City, noise from petroleum industry activities may become the greatest stationary noise source concern. Noise source control for existing drilling operations, new drilling operations and refineries and process plants are discussed below.



Noise Transmission

CITY OF SIGNAL HILL

FIGURE 9



Noise Control at the Source

CITY OF SIGNAL HILL

Michael Brandman Associates

FIGURE 10

Existing Drilling Operations

Noise from servicing, operation and redrilling of existing oil wells is controlled through the City noise ordinance. The applicable section is quoted below:

> 9.16.070 Servicing, Operation and Redrilling of Existing Oil Wells. For existing oil wells within 600 feet of a school, hospital or an occupied dwelling unit, the following provisions shall apply:
>
> A. Internal combustion engines shall be prohibited on pumping units as of August 18, 1982.
>
> B. Oil well servicing, except emergency servicing, is prohibited between the hours of 7 p.m. and 7 a.m.
>
> C. During servicing or redrilling activities, truck deliveries shall be prohibited between the hours of 7 p.m. and 7 a.m.
>
> D. During redrilling activities, soundproofing shall be provided to the satisfaction of the oil field inspector.
>
> E. At least 24 hours prior to starting redrilling activities, all residences within 600 feet shall be notified in writing of the pending work and shall be provided the name and phone number of the person available to answer inquiries regarding such work. (Ord. 81-8-878 6 (part)).

The following mitigation measures should also be considered where pre-existing drilling operation adversely affect noise-sensitive land uses.

- When a proposed residential or other noise-sensitive development is located within 600 feet of an operating oil well, and intervening structures or topography would not be expected to reduce the interior noise level to 45 dB(A), the developer shall be required to design and build the project to obtain that interior noise level.
- Oil well equipment should be periodically inspected and maintained to ensure the most efficient and quiet operation.
- Electric motors or similarly quiet engines should be used on pumping units.
- Soundproofing should be provided for drilling activities adjacent to residential areas.
- Servicing activities should also be limited in residential areas to weekdays.

New Drilling Operations

The Signal Hill Municipal Code requires issuance of a conditional use permit in order to drill new oil wells. Because noise impact varies with location, each use permit application should provide a site-specific assessment of noise impact. When drilling occurs near residences or other noise-sensitive land uses, measures should be employed to minimize disturbance of residents. The following mitigation measures could be applied:

- Construct access roads to the site in locations that minimize the noise impact on nearby sensitive land uses.

- Provide a temporary sound barrier by use of sound-absorptive blankets around the drilling pad and/or along property lines near sensitive land uses.

- Provide for noise attenuation around noise-producing equipment and areas on the rig, such as:

  - Work platform
  - Engine base and draw works
  - Main top blocks
  - Working board below the crown

- Place intake and exhaust silencers on the compressor unit.

- Limit the activity of the drilling operations as follows:

  - No truck movements on the site between the hours of 7 p.m. to 7 a.m.
  - Pull tools and pipe only during the hours of 7 a.m. and 6 p.m.
  - Limit the nighttime activity to drilling and other minimal noise-producing operations.

Refineries and Processing Plants

Consideration should be given to the control of noise in new plants or in modifications of existing plants when noise levels would otherwise be generated that

exceed the noise level standard established for the district in which they are located, or that would adversely affect nearby properties. The following mitigation measures could be applied when considering the conditional use permit required for the above-noted activities:

- Furnaces — Acoustically treat natural draft and/or forced draft units and combustion air intake plena. Insulation of firing walls and damped and lined ducting are but a few of the treatments that could be considered.

- Fans — Air cooled heat exchangers can be provided with silencers where effective (i.e., primarily on small, high-speed air fans). For larger coolers, quieter equipment can be installed.

- Motors — Quiet-design motors can be employed and located to minimize impacts on nearby properties.

- Centrifugal Compressors — Centrifugal compressors can be equipped with inlet and discharge silencers. Acoustical enclosures may also be considered.

- Centrifugal Pumps — Centrifugal pumps may be equipped with suction and discharge piping that has been acoustically treated. Acoustical enclosures may be considered.

- Steam and Gas Generators — Acoustical enclosures for turbines may be effective in reducing noise. Inlet and discharge piping may be acoustically treated and expansion joints added or comparable attenuative modifications made to minimize structure-borne vibrations.

- Control Valves — Quiet valves should be used whenever available. In other circumstances, in-line silencers can be employed.

- Atmospheric Vents, Exhaust and Intakes — Noisy vents should be equipped with silencers. Where safety is not an overriding concern, vents should be positioned close to the ground or below grade.

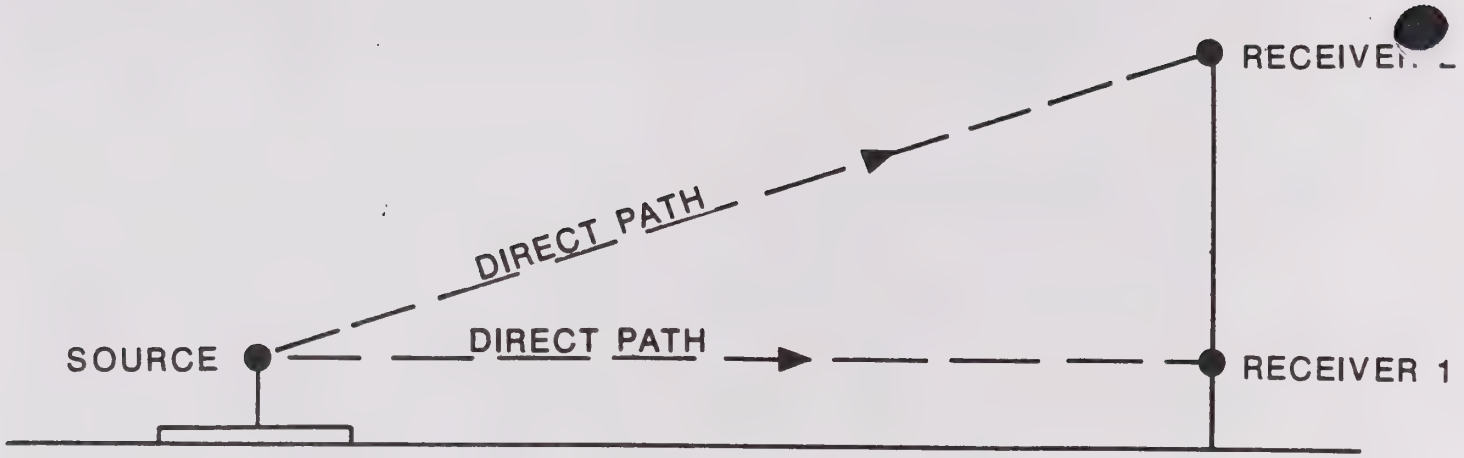
- Paging Systems — Loudspeaker paging systems should be eliminated wherever feasible. Suitable alternatives include radio or visual paging systems.

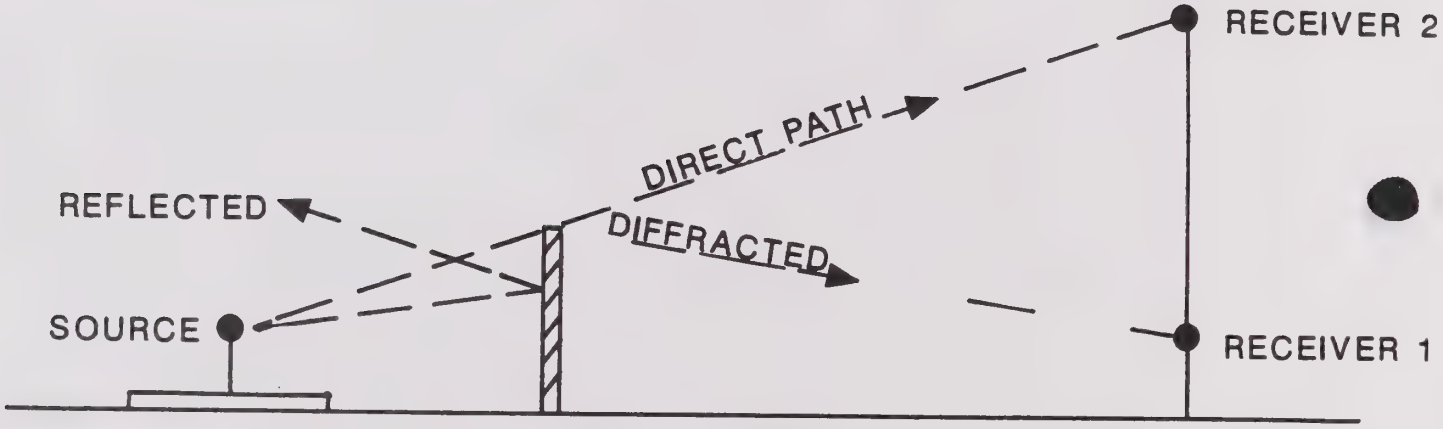
B. Noise Transmission Path

The transmission path from the source to the receiver has distinct and significant effects upon the characteristics of the sound reaching the receiver. Physical barriers can interfere with the path of sound waves, as shown in Figure 11. Examples of such structures are walls, berms and certain types of trees and hedges, as well as topography. The influence of a structure may be accidental, or it may be intentional, such as the use of intervening buildings between the source of sound and the receiver to reduce the intensity of the sound wave. Physical barriers either reflect the sound wave and/or absorb some of the energy.

Noise-attenuating barriers are commonly incorporated into projects and can effectively reduce noise levels. The effectiveness of a barrier depends on the relative height and materials of the barrier, the noise source, the affected area, and the horizontal distance between the source and the barrier, and between the barrier and the affected area. The importance of barrier location is shown in Figure 12 Barriers are often the only measure available to attenuate adverse noise levels. If they are evaluated early in the planning stage, they can be integrated into the architectural design of a proposed project at minimal cost. Table 10 shows possible noise reduction from several types of barriers.

When there are natural features on a site, such as hills and ridges, valleys and depressions, they should be preserved and incorporated into the site plan as a buffer to minimize noise transmission. A noise barrier may be any solid structure high and dense enough to reflect, rather than permit the passage of sound waves. Although noise barriers can be extremely effective, their aesthetic effect on a neighborhood must be considered.

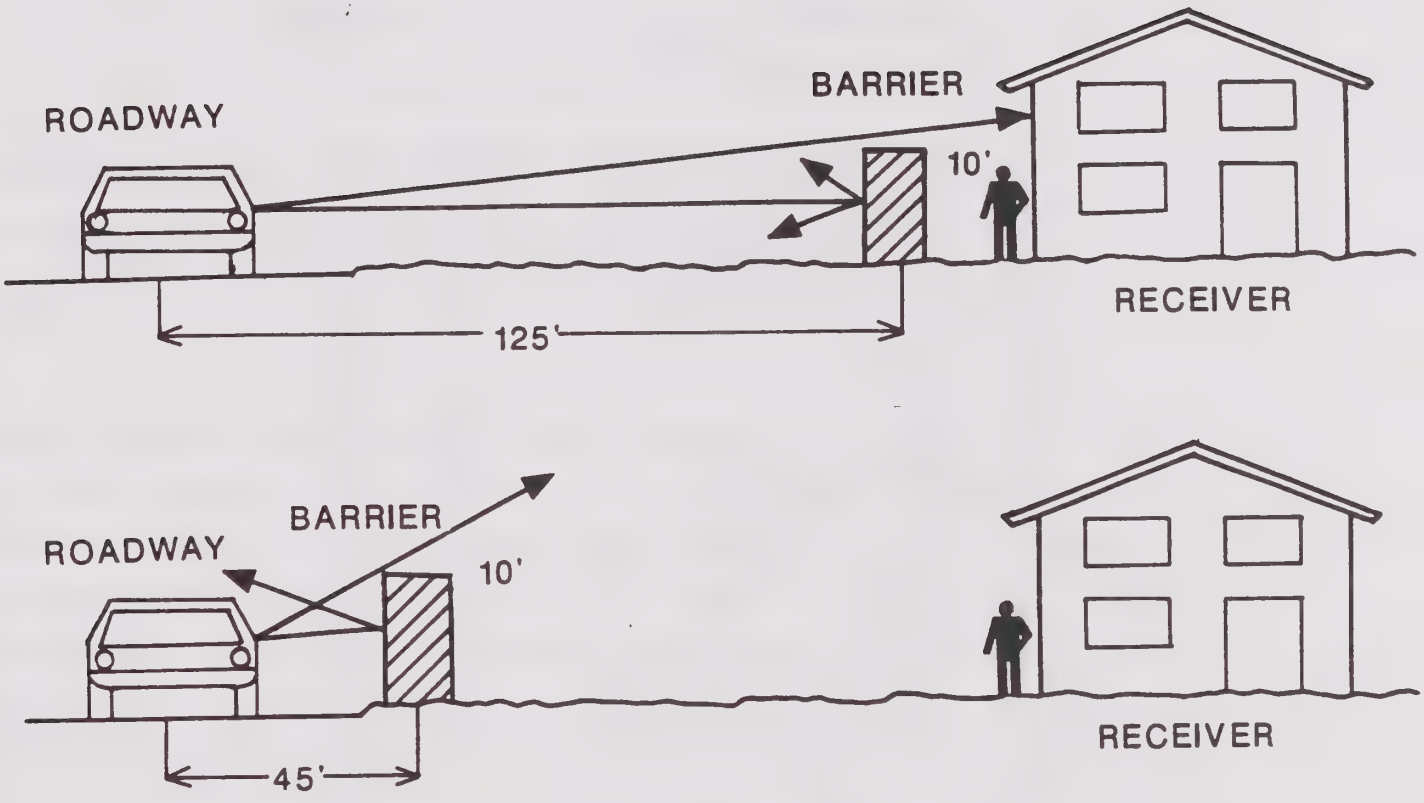




Noise Barrier Attenuation

CITY OF SIGNAL HILL

FIGURE 11



Effect of Moving a Noise Barrier

CITY OF SIGNAL HILL

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FIGURE 12

TABLE 10

BARRIER NOISE REDUCTION

Type	Noise Reduction
Earth Berm[1]	Up to 15
Block Walls[2]	Up to 15
Trees and Shrubs[3]	3 to 5

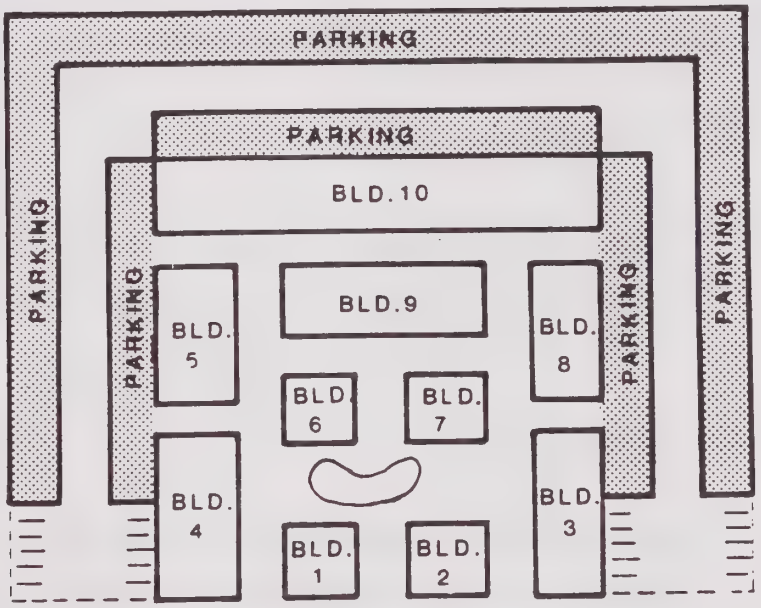
1 The berm must be high enough to block the line-of-sight between source and receiver.
2 Block walls must be high enough to block line-of-sight. Walls must be long enough to prevent noise from going around the ends of the structure.
3 Trees and shrubs must be dense vegetation and at least 100 feet in depth.

Noise can be scattered, absorbed and reduced by vegetation. However, a planted strip of trees and bushes must be 50- to 100-feet thick to reduce noise levels significantly. There are two other ways in which plants can be useful in reducing the effect of noise. First, a visual screen of plants between a noise source and a sensitive area is not only aesthetically pleasing, but also affects the perceived noise level by those who cannot see the noise source. Rows of dense bushes, vines or trees planted along a major expressway soften the impact of the traffic, even though the actual noise level is reduced very little. Second, bushy plants located around walls, hills, road shoulders and other large impervious obstacles improve their effectiveness as noise barriers and lower the amount of noise reflected from hard surfaces.

C. Noise Control At The Receptor

The control of noise at the receiver primarily focuses on isolating noise-sensitive activities from noise sources. Methods for noise control at receptors include: locating nonnoise-sensitive uses within the 60 dB CNEL, planning site layouts to mitigate or block noise transmission, incorporating design and construction techniques to insulate individual noise-sensitive buildings and redevelopment of existing noise-impacted areas with noise-compatible uses. An example of noise-mitigating site design is shown in Figure 13. This figure indicates effective site planning by locating nonnoise sensitive parking areas closest to the noise source. This exhibit also locates one structure (Building 10) so as to shield the remaining buildings and outdoor living areas from noise intrusion.

FREEWAY



Site Design for the Attenuation of Noise

CITY OF SIGNAL HILL

Michael Brandman Associates

FIGURE 13

Limiting the height of a structure can eliminate a direct noise transmission path from the source to the receiver. Because of the extensive topography variation throughout the city this can be a very effective means of noise control.

Incorporating noise insulation into noise-sensitive land uses can also be very effective. Figure 14 identifies some of the noise intrusion paths of a typical residential dwelling.

Noise mitigating actions at the source could include any of the methods listed below:

- Acoustical Site Planning

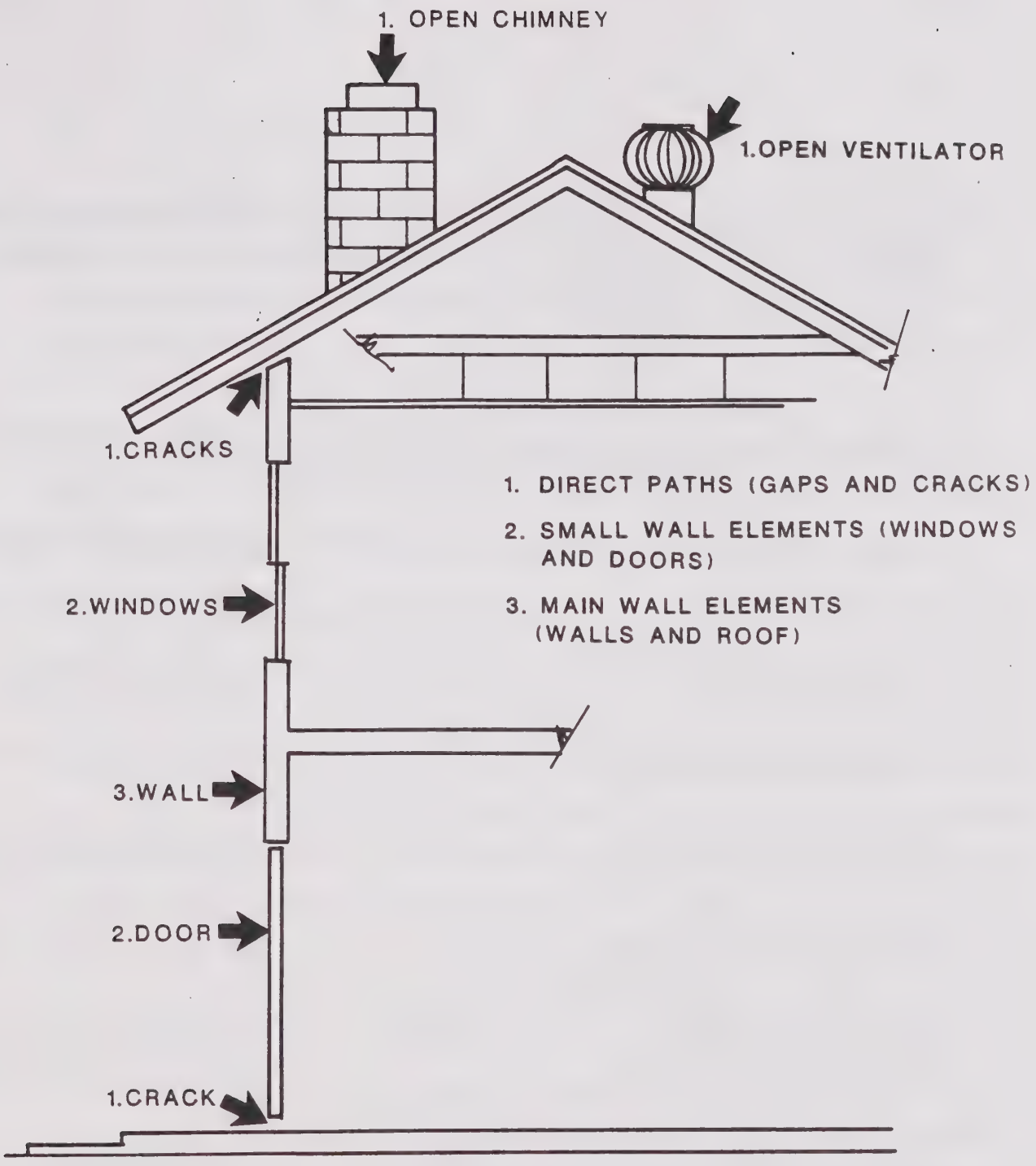
  - Increase the distance from noise source to receiver.
  - Minimize wall surfaces that are oriented directly toward noise source.
  - Cluster noise-sensitive development.

- Acoustical Architectural Design

  - Minimize window area oriented toward the noise source.
  - Reduce window-to-wall percentages (window area to wall size).
  - Locate noise-sensitive rooms away from the noise source.
  - Locate balconies on the sides of homes that are opposite the noise source.

- Acoustical Construction

  - Construct walls with greater sound insulation capabilities.
  - Provide air conditioning, thus lessening the need to open windows for cool ventilation.
  - Increase thickness of glass on windows.
  - Install double-glazed windows.
  - Install fixed-pane windows.



Noise Intrusion Paths

CITY OF SIGNAL HILL

Michael Brandman Associates

FIGURE 14

D. Summary

In dealing with specific existing and potential noise problems, the estimated benefits from implementation of specific noise mitigation techniques are shown in Table 11. The noise mitigation techniques are applicable to highway noise sources.

TABLE 11

ESTIMATED dB CNEL DECREASE FOR VARIOUS MITIGATION TECHNIQUES APPLICABLE TO HIGHWAY NOISE SOURCES

Mitigation Technique	Decrease in dB CNEL	Qualifications for Application
Change vehicle mix	10 to 12	Prohibition of heavy trucks from highways.
Lower traffic speed	5	From 55 mph to 30 mph with 10 percent heavy trucks.
Decrease traffic volume	3	50 percent decrease in 24-hour traffic flow.
Increase the source to receiver distance	20 to 23	At 1,500 ft. and relative to receiver distance level at 50 ft.
Locate a barrier or berm between source and receiver	5 to 18	Receiver is shielded by the barrier and is within 25 ft. of the barrier.
Shielding by buildings or building components	3 to 15	Building, courtyards, screened yards and shielded balconies. Relative to level at building location.
Building envelope noise level reduction	15 to 40	Varies from normal construction with open window to a tightly sealed envelope utilizing special acoustical design features. Relative to level at the building location.

Source: U.S. Department of Transportation, Federal Highway Administration, Guidelines for the Prevention of Traffic Noise Problems, April 1985.

VIII. GLOSSARY

A-Weighted Sound Level (dB(A)) — An A-weighted sound level is the sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and provides good correlation with subjective reactions to noise.

Ambient Noise Level — The composite noise from all sources near and far is the ambient noise level. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL) — A CNEL is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels occurring during the evening from 7 p.m. to 10 p.m. and addition of ten decibels to sound levels occurring during the night from 10 p.m. to 7 a.m. The 5 and 10 decibel penalties are applied to account for increased noise sensitivity during the evening and nighttime hours. The CNEL represents the daily energy noise exposure averaged on an annual basis. The State of California uses the dB CNEL noise index to relate community noise exposure to compatibility criteria.

Day-Night Average Level (Ldn) — The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of 10 decibels to sound levels occurring during the nighttime from 10 p.m. to 7 a.m. The 10-decibel penalty is applied to account for increased noise sensitivity during the nighttime hours. The Ldn represents the daily energy noise exposure averaged on an annual basis and is typically within plus or minus 1 dB CNEL.

Decibel (dB) — A decibel is a unit for measuring sound pressure level and is equal to 10 times the logarithm (to the base 10) of the ratio of the measured sound pressure squared to a reference pressure (i.e., 20 micro-pascals) squared.

Equal Noisiness Zones — Areas or regions of a community wherein the noise levels generally similar (within a range of 5 dB) are defined as equal noisiness zones. Locations approximately equal distances from noise sources and within similar noise contours would be exposed to similar levels of noise.

Equivalent Sound Level (Leq) — An Leq is the sound level corresponding to a steady state sound level containing the same total energy as a time varying sound levels over a given sample period.

Habitable Room — A habitable room is defined as any room meeting the requirements of the Uniform Building Code or other applicable regulations that is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

Intrusive Noise — That noise exceeding the existing ambient noise at a given location is termed an intrusive noise. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence and tonal or informational content, as well as prevailing ambient noise level.

L Percentile — L percentiles represent the A-weighted sound level exceeded for the identified percent of the sample time. For example, a value of 55 dB(A) L_{10} would mean that 55 dB(A) was exceeded 10 percent of the time. Other L percentiles commonly used include L50, L90, L99, etc.

Noise — Noise is any unwanted sound, or sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying.

Noise Contours — The lines drawn around a noise source indicating constant or equal level of noise exposure from that source are termed noise contours.

Noise Sensitive Land Use — Noise-sensitive land uses are land uses associated with indoor and/or outdoor human activities that may be subject to stress and/or significant interference from noise. They include residential (single- and multi-family dwellings, mobile home parks, dormitories and similar uses); transient lodging (including hotels, motels and similar uses); hospitals, nursing homes, convalescent hospitals and other facilities for long-term medical care; and public or private educational facilities, libraries, churches and places of public assembly.

Outdoor Living Area — Outdoor living area is a term used to define spaces that are associated with residential land uses and are typically used for passive recreational activities. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. Outdoor areas usually not included in this definition are front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses.

Sound Level Meter — A sound level meter is an instrument, including a microphone, amplifier and output meter, and frequency weighting networks for the measurement and determination of sound levels.

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APPENDIX A
NOISE STANDARDS AND GUIDELINES

A. Federal

The federal government has adopted a number of standards and recommended noise criteria to protect people in both the working and home environments. The standards and criteria most applicable to the City of Signal Hill are discussed below. The federal agencies involved include: Department of Labor - noise standards for the workplace; Federal Highway Administration - design noise levels for federal highway projects; Department of Housing and Urban Development - maximum noise level standards for federally assisted housing projects, and; Environmental Protection Agency - guidelines to adequately protect the public welfare. The federal government specifically preempts local control of noise emissions from aircraft, railroads and interstate highways.

1. Department of Labor

The first federal efforts regulating noise were issued by the Department of Labor in 1969 and established noise as an occupational health hazard. As a result, two legislative acts have been adopted that regulate noise from industrial fixed-point sources resulting in hearing loss. The Walsh Healey Public Contracts Act, as amended, includes provisions for occupational noise regulations. Failure by a corporation to comply with the established standards may result in the corporation's removal from a list of bidders eligible for federal contracts.

The second legislative action, the Occupational Safety and Health Act (OSHA) of 1970, set noise exposure standards as shown in Table A-1 for all businesses engaged in interstate commerce.

TABLE A-1

OSHA PERMISSIBLE NOISE EXPOSURE

Duration-Hours Per Day	Sound Level dB(A)
8	90
6	92
4	95
3	97
2	100
1	105

Source: Department of Labor Occupational Noise Exposure Standard, Code of Federal Regulations, Title 29, Chapter XVII Part 1910, Subpart G, 36 FR10466, May 29, 1971, as amended and corrected through June 19, 1983.

2. Federal Highway Administration (FHWA)

The FHWA has established noise standards for various types of land use. The FHWA noise standards by land use category for use in the planning and designing of highways are shown in Table A-2. These standards apply to federally funded highway projects, and are in terms of both Equivalent Noise Level (Leq) and L_{10}.

TABLE A-2

FHA DESIGN NOISE LEVEL/LAND USE RELATIONSHIPS

Category	Leq[1]	L_{10}[2]	Location	Description of Land
A	57	60	Exterior	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need (i.e., amphitheaters, parks and open space).
B	67	70	Exterior	Picnic areas, recreation areas, playgrounds, active sport areas and parks not included in Category A and residences, motels, hotels, public meeting rooms, schools, churches, libraries and hospitals.
C	72	75	Exterior	Developed lands, properties, or activities not included in the above categories.
E	52	55	Interior	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

Source: Department of Transportation, Federal Highway Administration Highway Noise Control Standards and Procedures, Title 23, Code of Federal Regulations, Chapter 1, Subchapter J, Part 772, 38, FR 15953, June 19, 1973, as amended through May 29, 1979.

Exterior noise levels apply to outdoor areas that have regular human use and in which a lowered noise level would be beneficial. The noise level values need not be applied to areas having limited human use or where lowered noise levels would produce little benefit. The indoor level relates to indoor activities where no exterior noise-sensitive land use or activity is identified.

3. Department of Housing and Urban Development (HUD)

It is HUD's general policy to provide minimum national noise standards applicable to HUD programs to protect citizens against excessive noise in their communities and places of residence. HUD has adopted environmental criteria and standards for determining project acceptability and necessary mitigation measures to ensure that

1 Equivalent Noise Level.
2 Noise level exceeded 10 percent of the time.

activities assisted by HUD achieve the goal of a suitable living environment. By "activities assisted," HUD is referring to its various housing and urban development financial assistance programs.

HUD's overall goal is for exterior residential noise levels not to exceed 55 dB Ldn and for interior noise levels not to exceed 45 dB Ldn. However, as Table A-3 indicates, for purposes of regulation and to meet other program objectives, exterior sound levels of 65 dB Ldn and below are acceptable and allowable. Projects within 65 to 75 dB Ldn require special environmental clearance and additional noise insulation. Projects with a 75 dB and greater require a submittal of an Environmental Impact Statement (EIS).

TABLE A-3

HUD SITE ACCEPTABILITY STANDARDS

Acceptability	Ldn	Special Approvals and Requirements
Acceptable	65 dB and less	None
Normally Unacceptable	65 dB to 75 dB	Special environment clearance and 5 dB additional attenuation for building with 65 to 70 dB Ldn and 10 dB additional attenuation for buildings within 70 to 75 dB Ldn.
Unacceptable	75 dB and greater	Submittal of Environmental Impact Statement.

Source: Department of Housing and Urban Development Environmental Criteria and Standards, Title 24, Code of Federal Regulations, Part 51, issued at 44 FR 40860, July 12, 1979; amended by 49 FR 880, January 6, 1984.

4. Environmental Protection Agency (EPA)

In 1972, Congress enacted the Noise Control Act. This act authorized the EPA to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) as shown in Table A-4. The EPA cautions that their identified levels are not

standards because they do not take into account the cost or feasibility of the levels. For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an Leq (24) of 70 dB. The "(24)" signifies an Leq duration of 24 hours. The EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels do not exceed 55 dB(A) and 45 dB(A), respectively.

TABLE A-4

SUMMARY OF EPA NOISE LEVELS IDENTIFIED AS REQUISITE TO PROJECT PUBLIC HEALTH AND WELFARE WITH AN ADEQUATE MARGIN OF SAFETY

Effect	Level	Area
Hearing Loss	Leq (24) _70 dB	All areas.
Outdoor activity interference and annoyance	Ldn _55 dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	Leq (24) _ 55 dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	Leq _45 dB	Indoor residential areas.
	Leq (24) _45 dB	Other indoor areas with human activities such as schools, etc.

Source: U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety." March 1974.

The noise effects associated with an outdoor Ldn of 55 dB are summarized in Table A-5. At 55 dB Ldn, 95 percent sentence clarity (intelligibility) may be expected at 3.5 meters, and no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

TABLE A-5

SUMMARY OF HUMAN EFFECTS IN AREAS EXPOSED TO 55 dB CNEL

Type of Effect	Magnitude of Effect
Speech - Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety.
- Outdoors	100 percent sentence intelligibility (average) at 0.35 meters.
	99 percent sentence intelligibility (average) at 1.0 meters.
	95 percent sentence intelligibility (average) at 3.5 meters.
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below "vigorous action" (attitudes and other nonlevel related factors may affect this result).
Complaints	1 percent dependent on attitude and other nonlevel related factors.
Annoyance	17 percent dependent on attitude and other nonlevel related factors.
Attitudes Toward Area	Noise essentially the least important of various factors.

Source: U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," March 1974.

B. State Of California

The State of California has adopted noise standards in areas of regulation not preempted by the federal government. State standards regulate noise levels of motor vehicles, freeway noise affecting classrooms, noise insulation, airport noise and occupational noise control. The state has also developed land use compatibility guidelines for community noise environments. The applicable standards and guidelines for the city are discussed.

1. Motor Vehicles

The California Motor Vehicle Code sets operational noise limits for motor vehicles (Section 23130), requires an adequate muffler in constant operation and properly maintained (Section 27150), prohibits the sale or installation of a motor vehicle exhaust system unless it meets regulations or standards (Section 27150.1), prohibits the modification of the exhaust system to amplify or increase the noise above that of the original system (Section 27151), prohibits the sale of new vehicles exceeding the noise limits (Section 27160), and sets noise limits for the operation of off-highway motor vehicles (Section 38280) as shown in Table A-6. Police and traffic officers generally enforce this code.

2. Freeway Noise Affecting Classrooms

The California law on freeway noise affecting classrooms is designed to mitigate noise impacts to existing classrooms, libraries, multipurpose rooms and spaces used for pupil personnel services of a public or private elementary or secondary school. State-funded noise abatement programs are required when freeway traffic or the construction of the freeway exceeds 55 dB(A) L_{10} or 52 dB(A) Leq. The temporary or permanent noise abatement program may include installing acoustical materials, eliminating windows, installing air conditioning or constructing sound buffer structures. Further explanations of this law are found in California Streets and Highway Code, Division 1, State Highways, Chapter 1, Administration, Article 6; Section 216, as amended.

3. Noise Insulation Standards

The State Noise Insulation Standards are found in California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4 as amended through June 16, 1979. The purpose is to establish minimum noise insulation performance standards to protect persons within new hotels, motels, apartment houses and dwellings other than detached single-family dwellings.

The standards state that interior noise levels with windows closed shall not exceed an annual noise level of 45 dB CNEL in any habitable room. In addition, residential buildings or structures within a 60 dB CNEL from airport, vehicular or industrial

TABLE A-6

CALIFORNIA MOTOR VEHICLE NOISE LIMITS FOR VEHICLES

Sale of New Vehicles	Date of Manufacture	dB(A) Value at at 50 Feet
Motorcycles	Before 1970	92
Motorcycles, other than motor-driven cycles	After '69, Before '73	88
	After '72, Before '75	86
	After '74, Before 86	83
	After '85	80
Vehicle with a gross vehicle weight of 6,000 lbs. or more	After '67, Before '73	88
	After '72, Before '75	86
	After '74, Before '78	83
	After '77	80
Any other motor vehicle	After '67, Before '73	86
	After '72, Before '75	84
	After '75	80
Noise level limits for the operation of off-highway motor vehicles	Before '73	92
	After '72, Before '75	88
	After '74	86

Operation of Vehicle	Speed Limit 35 or Less[1]	Speed Limit 45 or Less[2]	Speed Limit More than 45[2]
Any motor vehicle with a manufacturer's gross vehicle weight rating of 6,000 pounds or more and any combination of vehicles towed by such motor vehicle.	82 dB(A)	—	—
Any motor vehicle with a manufacturer's gross vehicle weight rating of more than 10,000 pounds and any combination of vehicles towed by such a motor vehicle.	—	86 dB(A)	90 dB(A)
Any motorcycle other than a motor-driven cycle.	77 dB(A)	82 dB(A)	86 dB(A)
Any other motor vehicle and any combination of vehicles towed by such motor vehicle.	74 dB(A)	76 dB(A)	82 dB(A)

Source: Excerpts from the California Motor Vehicle Code.

1 On streets with a grade not exceeding plus or minus 1 percent.
2 On any street.

noise sources shall require an acoustical analysis showing that the proposed building has been designed to limit intruding noise to the allowable 45 dB CNEL interior noise level. The noise insulation standards for floor-ceiling assemblies, wall assemblies, and dwelling unit entrance doors are shown in Table A-7.

TABLE A-7

CALIFORNIA NOISE INSULATION STANDARDS

Structure	Sound Transmission Class (STC) (Rated/Field-Tested)	Impact Insulation Class (IIC) (Rated/Field-Tested)
Floor-ceiling assemblies	50/45	50/45
Wall assemblies	50/45	50/45
Dwelling unit entrance doors from interior corridors	30	—

Source: California Administrative Code, Title 25, Article 4, Chapter 1, Subchapter 1, Article 4, as amended through June 16, 1979.

4. Airport Noise Standard

California Administrative Code, Title 21, Public Works, Chapter 25, Division of Aeronautics, Subchapter 6, noise standards require that land use be compatible within a criterion CNEL contour for airports. Although helicopters are not specifically mentioned, it is the intent of this standard to also be applicable to heliports and helipads. One objective of this standard is to create an urban development pattern in which all the land included within the criterion CNEL contour is devoted to either airport or nonsensitive land uses, as defined in the standards.

The current standard is 70 dB CNEL. These standards became more restrictive on January 1, 1986, at which time land use incompatibilities are not permitted within an airport's 65 dB CNEL contour.

Incompatible land uses including:

- Single-family dwellings
- Multiple-family dwellings

- Trailer parks
- Schools of standard construction
- Hospitals

Compatible land uses include:

- Agricultural
- Airport property
- Industrial property
- Commercial property
- Property subject to avigation easement for noise
- Zoned open space
- High rise apartments in which adequate protection against exterior noise has been included in the design and construction, along with a central air conditioning system. Adequate protection means the noise reduction (exterior to interior) shall be sufficient to assure that interior CNEL in all habitable rooms does not exceed 45 dB during aircraft operations.

5. Occupational Noise Control Standards

California Occupational Noise Control Standards are found in California Administrative Code, Title 8, Industrial Relations, Chapter 4, as revised and effective September 28, 1984. A summary of the permissible noise exposure at a workplace is shown in Table A-8.

TABLE A-8

CALIFORNIA OCCUPATIONAL NOISE CONTROL STANDARDS

Sound Level dB(A)	Permitted Hours of Exposure Per Weekday
90	8
95	4
100	2
105	1
110	0.5

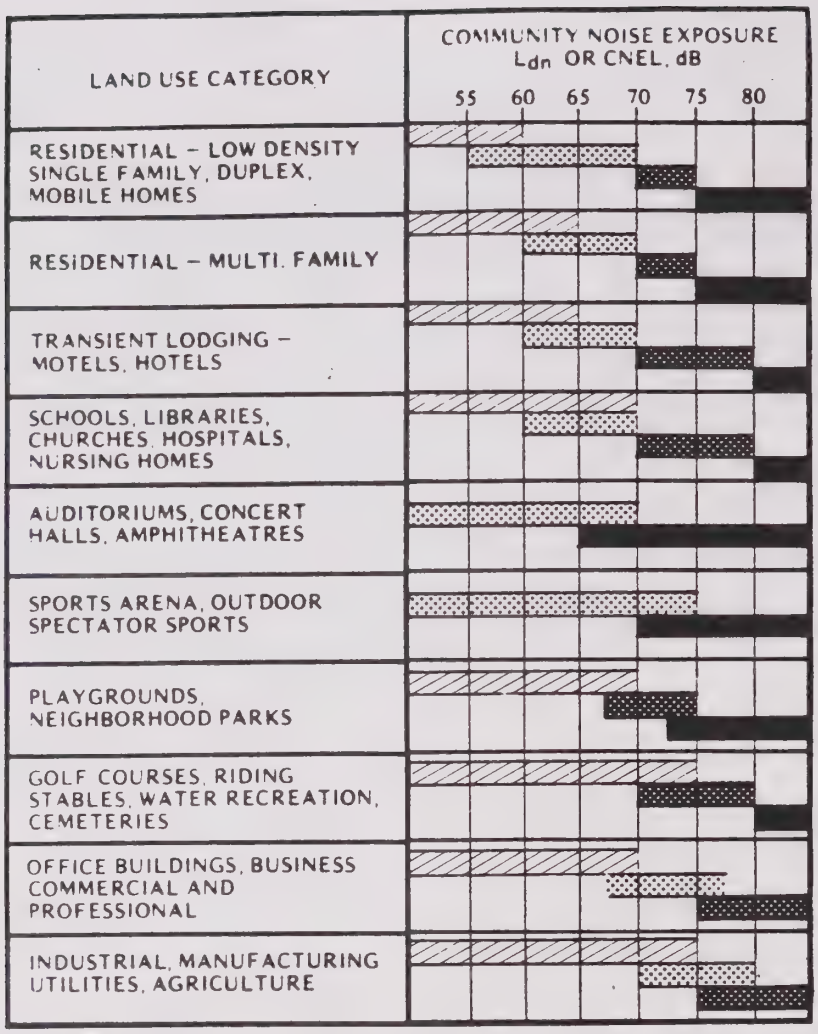
Source: California Administrative Code, Title 8, Industrial Relations, Chapter 4, as revised and effective September 28, 1984.

6. Land Use Compatibility Guidelines

The State Office of Noise Control in "Guidelines for the Preparation and Content of Noise Elements of the General Plan," February 1976, provides guidance for the acceptability of projects within specific Ldn/CNEL contours. These land use compatibility guidelines are provided in Figure A-1. Residential uses are normally unacceptable in areas exceeding 70 dB CNEL and conditionally acceptable within 60 to 70 dB CNEL. Schools, libraries, churches, hospitals and nursing homes are treated as noise-sensitive land use requiring acoustical studies within areas exceeding 60 dB CNEL. However, the state stresses that these guidelines can be modified to reflect communities sensitivity to noise.

APPENDIX B

LONG BEACH AIRPORT NOISE ABATEMENT PROCEDURES



INTERPRETATION

NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

CONSIDERATIONS IN DETERMINATION OF NOISE–COMPATIBLE LAND USE

A. NORMALIZED NOISE EXPOSURE INFORMATION DESIRED

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or L_{dn}. Normalized values are obtained by adding or subtracting the constants described in Table 1 to the measured or calculated value of CNEL or L_{dn}.

B. NOISE SOURCE CHARACTERISTICS

The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located in Community Noise Exposure Areas greater than 65 dB should be discouraged and considered located within normally unacceptable areas.

C. SUITABLE INTERIOR ENVIRONMENTS

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L_{dn}. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

D. ACCEPTABLE OUTDOOR ENVIRONMENTS

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

Source: California Department of Health, Guidelines for the Preparation and Content of Noise Elements of The General Plan, February, 1976.

Land Use Compatibilty
CITY OF SIGNAL HILL

Michael Brandman Associates

FIGURE A1

LONG BEACH AIRPORT
NOISE ABATEMENT PROCEDURES

PLEASE NOTE: These procedures are recommended (except those enforced by City ordinance) for arrivals to and departures from Long Beach Airport. However, they are not intended to abrogate the preogatives or responsibilities of the pilot for safe aircraft operation and compliance with overriding directives.

1. **ALL AIRCRAFT**

   DEPARTURES

   a. Climb at best rate.

   b. No intersection departures 25R.

   c. All runways — no intersection departures, 2200 hrs. to 0700 hrs. local.

   ARRIVALS

   a. Utilize high profile, low energy approaches whenever possible.

   b. Approach on or above glideslope/VASI.

   PATTERN

   a. Pattern altitude 1000 feet MSL, large aircraft 1500 feet MSL.

   b. Remain as close to the airport and as high as practicable. (The preferential flight track is within the boundaries of Cherry, Carson, Clark and Willow Streets).

   c. Touch and go, stop and go, low approaches: Restrictions apply — See Ordinance Section.

2. **LARGE (12,500 lbs. and above) AND JET AIRCRAFT**

   a. Use Runway 30-12 whenever possible.

   b. Use NBAA or Company Noise Abatement Procedures for arrivals and departures.

   c. VFR arrivals should intercept localizer no closer than "Steam Plant" (4.5 nm from Runway 30).

3. **ENFORCED BY ORDINANCE**

   (City of Long Beach Municipal Code Chapter 8.84)

   a. Touch and go, stop and go, and low approach operations are allowed on the East-West and North-South runways only between 7:00 a.m. and 7:00 p.m., Monday through Friday and 8:00 a.m. to 3:00 p.m., Weekends and Holidays.

   b. Runways 25L, 25R/7L, 16L/34R, and 16R/34L are closed between the hours of 10:00 p.m. and 7:00 a.m.

   c. No departures are permitted on runway 7R between the hours of 10:00 p.m. and 7:00 a.m.

   d. No formation takeoffs or landings are permitted.

4. **NOISE LIMITS**

   a. Runways 25L/7R and 25R/7L — An SENEL of 90 dB as measured at monitoring stations 1, 2, 5, and 6 OR an equivalent EPNdB noise level.

   b. Runway 30-12 — At or below the following noise levels as measured at the appropriate monitoring station. (Your aircraft must be certificated at or below these limits in AC 36-1C to operate at Long Beach Airport.)

      Daytime (7:00 a.m. to 10:30 p.m.)

Takeoff:	93 EPNdB
Approach:	106 EPNdB

      Nighttime (10:30 p.m. to 7:00 a.m.)

Takeoff:	80.1 EPNdB
Approach:	90.5 EPNdB

      NOTE: Certain limited exemptions apply. See City of Long Beach Municipal Code Chapter 8.84 (Aircraft Noise Control Regulation) for details. Noise Abatement Office: (213) 421-8293

NOTICE: DO NOT ATTEMPT TO FOLLOW ANY OF THE ABOVE PROCEDURES IF SUCH PROCEDURES ARE OUTSIDE THE OPERATING PARAMETERS OF YOUR AIRCRAFT OPERATIONS MANUAL.

Prepared by the Long Beach General Aviation Noise Abatement Committee (GANAC)

AV-17A 3/85

Long Beach Airport Noise Abatement Procedures
CITY OF SIGNAL HILL

Michael Brandman Associates

FIGURE B

CITY OF SIGNAL HILL
PARK AND RECREATION
MASTER PLAN



Prepared by:

POD, INC.

353

CITY OF SIGNAL HILL
PARKS AND RECREATIONAL
MASTER PLAN

August 25, 1989

Prepared for:

THE CITY OF SIGNAL HILL
2175 Cherry Avenue
Signal Hill, CA 90806

Prepared by:

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Los Angeles, CA 90010

SIGNAL HILL PARKS AND RECREATION MASTER PLAN

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Mae Marie Livermore	Commissioner
Ginnie Lewis	Commissioner
Shannon Murphy	Commissioner
Marc Solomon	Commissioner

Planning Commission

Carol Churchill	Commissioner
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Michael Noll	Commissioner
Alan Ross	Commissioner

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CHAPTER ONE
EXECUTIVE SUMMARY

1.1 INTRODUCTION

The following executive summary will briefly describe the results of a year long process involving the City of Signal Hill, its citizens and the consultant team, in the development of a Parks and Recreation Master Plan. The plan is intended to guide the City of Signal Hill over the next twenty years. The Executive Summary briefly describes the projects goals, its findings, recommendations and funding options. The main body of the report describes these findings and recommendations in more detail and is intended to serve the city staff in implementing the plan.

1.2 GOALS AND OBJECTIVES

One of the first tasks for the project team was to clarify the goals and objectives of the city in undertaking the project. Based upon an initial workshop with the project steering committee, the City of Signal Hill City Council, Planning Commission, and Parks and Recreation Commission, the following goals and objectives were identified.

<u>The Master Plan will</u>:

- Outline the recreation and open space needs and desires of Signal Hill residents.

- o Outline improvements to existing parks and recreational facilities.
- o Identify future recreation needs, sites, facilities and programs.
- o Organize and define funding mechanisms.
- o Be incorporated into the city's regulatory system.
- o Be realistic in meeting the needs of the community and relating to the community scale.
- o Outline a financing program that encourages the development of single family homes.
- o "Meet People Needs," for all age groups.
- o Promote the development of parks within walking distance of residential areas.

1.3 MAJOR ISSUES AND FINDINGS

1. Based on the city's General Plan goal of 4 acres/1,000 population, Signal Hill has a current deficit of 2.71 acres of park land. As the population grows to an estimated 12,000 people, the city will need an additional 17.5 1 acres of parkland to meet the 4 acre per 1,000 goal cited in the General Plan (Environmental Resources element, Section 2).
2. Particular areas of the city have been identified, most notably the medium and high density residential area at the city's Western edge, that are underserved by the current parks systems.

3. Existing active outdoor recreational facilities in Signal Hill Parks are limited to a half basketball court, one softball diamond and three tot lots. Long Beach Unified School District facilities include: 4 basketball courts, 2 ball diamonds with backstops (one of asphalt), one handball court and a variety of play equipment. Based on this inventory, it is evident that deficiencies exist in the provision of active recreation facilities as defined by National Recreation and Park Association standards.

4. Only 3% of the city's residents use the Long Beach Unified Schools located within Signal Hill for recreation purposes outside of attending classes.

5. There is a perceived imbalance in the city's current financial fees formula that seemingly penalizes builders and owners of single family housing.

6. Current recreation usage and stated desires for additional facilities are focused around running, strolling and bike riding. These are path systems, rather than facility elements.

7. There is a strong desire for the development of park facilities on the top of the hill to take advantage of the views.

8. Signal Hill's three existing parks are perceived as too small.

1.4 SUMMARY OF PLANNING RECOMMENDATIONS

The following is a summary of the major recommendations of the Signal Hill Parks and Recreation Master Plan.

1. Acquire And Develop Parks In Residential Areas Not Currently Served By The Parks System.

   Specifically, develop new facilities along Burnett Street, Hathaway Avenue, the hilltop area, 21st Street, Hill Street and Gundry Avenue.

2. Develop A City Wide Walkway System

   Using signs and maps, a city wide system of walkways is proposed linking various sections of the city, parks and the hilltop area.

3. Develop A Hilltop Park For All City Residents

   Taking advantage of the spectacular views, this park will serve local residents and visitors, while serving as the major focal point of the walk and bikeway systems.

4. Upgrade Signal Hill Park

   The focal point of the community's recreation and programmed activities, Signal Hill Park needs to be further upgraded and enlarged in order to meet its important role as a community park.

5. Utilize The Long Beach School District Facilities Located Within The City

The City of Signal Hill should participate in the upgrading of existing school facilities to take advantage of these underutilized assets.

6. Develop a Hilltop Reservoir Park

In conjunction with the development of the Hilltop Reservoir, the City should develop a Park on the top of the site.

7. Develop The Alamitos Well Site.

The Alamitos well site should be acquired, preserved and developed as a reminder of the city's history and as a key open space element.

8. Conduct Studies For The Development Of A Citywide Bike System

Connecting various sections of the City, the system would tie if possible into the extensive Long Beach and County Systems.

9. Do Not Develop Legion Park

The proposed Legion Park property should be reallocated into other, non-park uses.

(See Figures 1.0 and 1.1.)

1.5 SUMMARY OF FINANCIAL RECOMMENDATIONS

TABLE 1.0

Summary of Funding Recommendations

1. Source General Fund - Maintenance and Recreational Program Allocati

Use:	Maintenance and upkeep of existing pa facilities, recreation programming, staff.
Recommendations:	Keep at current level, increase commensurate increases in population, parkland area a facilities, inflation.
Estimated Revenue: Yearly	$786,510 (1988)

2. Source General Fund - Capital Replacement Fund

Use:	Replacement of capital improvements in parks a open space facilities as they become worn o or obsolete.
Recommendations:	Establish replacement fund based upon estimat value of capital improvements divided anticipated life expectancy.
Estimated Revenue: Yearly	$111,800 (1989)

3. Source Development Fees - Quimby Act, AB 1600

Use: Acquisition and Development

Recommendations:

A. Revise the subdivision ordiance park an recreation fee (Quimby Act) to $7,700 for eac single family dwelling or multi-family dwelling (Assuming $20 sf land value, the contributio would be revised to 385 sf per unit.)

B. Adopt a new $7,700 per dwelling unit develope fee for new residential units which ar currently not subject to the subdivisio ordinance park and recreation fee. (AB 160 developer fee based on 385 sf per unit.)

C. Adopt a new $.35 per square foot developer fe for new commercial development.

Estimated Revenue:
20 Year Total $10,000,000 to $13,000,000

4. Source Redevelopment Agency Contribution

Use: Acquisition and Development

Recommendation: Pledge a portion of anticipated tax incrimen from new development within the project area t park acquisition and development.

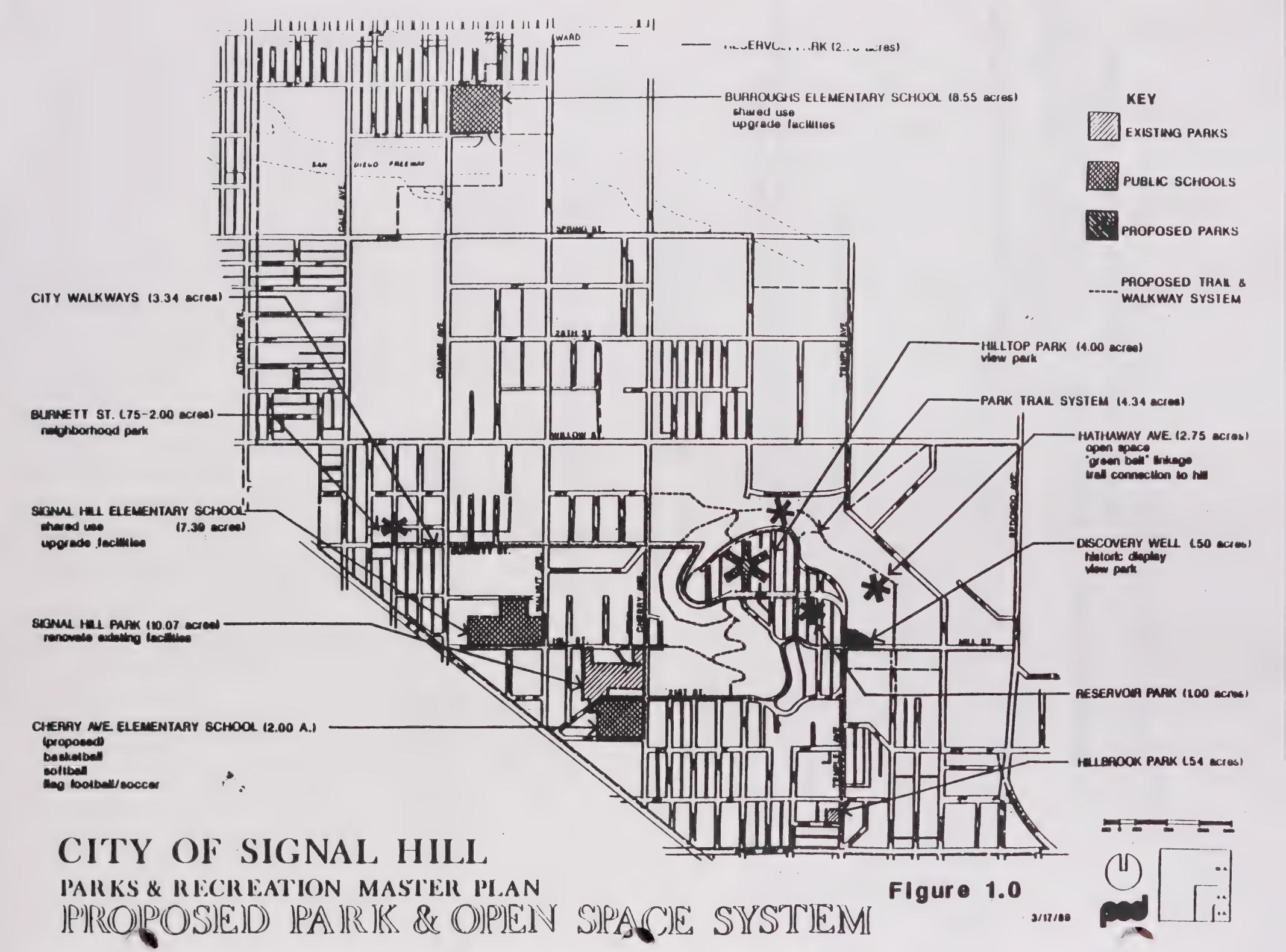
Estimated Revenue:
20 Year Total $2,789,606

5. Source: Grant Program

Use:	Varies, dependent on conditions of grants.
Recommendations:	Assign staff to coordinate all Signal Hil Grants, aggressively pursue all opportunities.
Estimated Revenue: Yearly	Establish yearly goal for Parks and Recreation. $30,000 (1989)

6. Source User Fees

Use:	Maintenance and Operations
Recommendations:	Establish modest fees to supplement operatio costs of permit and specialized events.
Estimated Revenue: Yearly	Less than $2,500



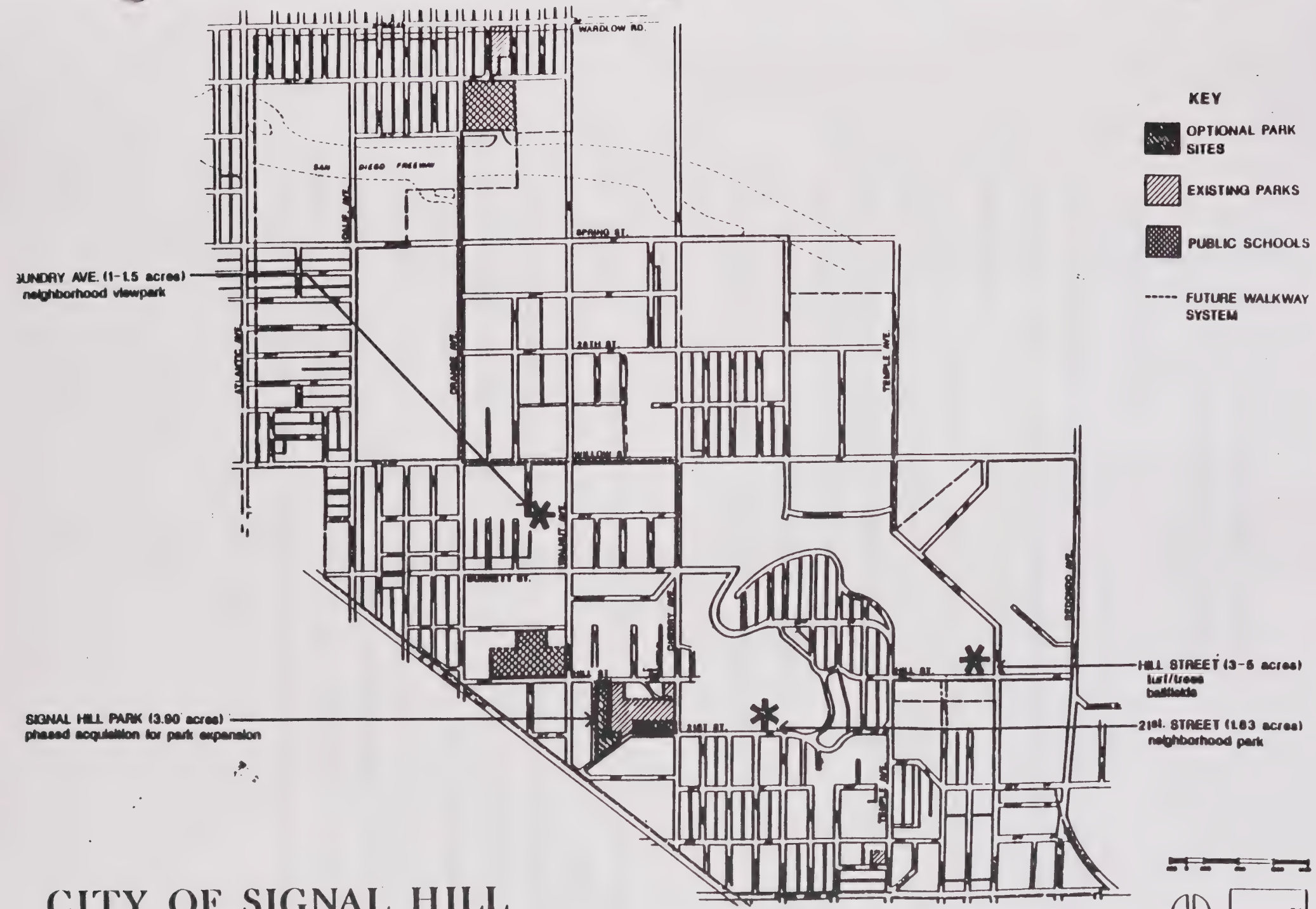
CITY OF SIGNAL HILL

PARKS & RECREATION MASTER PLAN

PROPOSED PARK & OPEN SPACE SYSTEM

Figure 1.0

3/17/89



CITY OF SIGNAL HILL

PARKS & RECREATION MASTER PLAN

OPTIONAL PARK DEVELOPMENTS

Figure 1.1

3/17/80

SECTION I

CHAPTER TWO
INTRODUCTION

2.1 PROJECT BACKGROUND

As the 1980's draw to a close, the City of Signal Hill finds itself on the verge of a tremendous period of growth, expansion and transition. Historically known as an "Oil Town," the city is increasingly becoming an attractive setting for more service-oriented business and light industry. Its small town friendliness, magnificent views and close proximity to Long Beach and Los Angeles make the city an attractive place to live. Its population, currently about 8,500, has grown from 5,734 since 1980, and is ultimately expected to reach 12,000.

In response to this growth, the City of Signal Hill has been diligently planning for its future. In 1986, the city adopted its third General Plan, which sets out the planning and policy principals that will guide the City's growth in the future. A major component of the general plan is the Environmental Resources element, which includes sections on parks, recreation and open space. These sections set forth the policies and goals for the city's open space and recreation needs and requirements. The goals include the provision of 4 acres of open space per 1000 population.

To help finance the development of recreational facilities and open space, the City, in 1982, adopted an ordinance establishing Section 18.32.120 of the Municipal Zoning Code, which pursuant to the Quimby Act of 1965, allows for the collection of fees for the development of open space as a condition to the approval of a tentative map or parcel map for a residential subdivision. An additional condition of the Quimby Act is that prior to the enactment of a park fee ordinance, a city or county must first adopt a Recreation Element as part of its general plan.

The development of a Parks and Recreation Master Plan is intended to guide the city's future development of parks and open space by identifying the location, size and types of facilities required to meet both the city's current and future needs. Section II of this report will address these issues.

In addition to the development of the master plan component there is a need for the city to clearly establish and define the funding parameters, including rates and conditions of financing improvements and to have a strategy for phasing and implementation. Section III of the report will address these issues.

2.2 MASTER PLANNING PROCESS

In the spring of 1988, the City of Signal Hill released a Request for Proposals to select a consulting firm to undertake

a Parks and Recreation Master Plan for the City. The Landscape Architecture and Planning firm of POD, Inc./Los Angeles was selected and began undertaking the study.

The project team's planning process involved a number of major steps. The first was the clear identification of the city's goals and objectives for the study. This was accomplished by meetings with the project steering committee and a facilitated workshop with the Parks and Recreation Commission, Planning Commission and the City Council. A summary of the workshop results can be found in Appendix G. A second step was to gain a clear and thorough understanding of existing Signal Hill park facilities and the relationship of park facilities located nearby in the City of Long Beach. Finally, it was important to understand the resident's opinions, ideas and desires for parks and open space within the city. To accomplish this a mail survey was made of all Signal Hill households and supplemented by field surveys completed by the Parks and Recreation Commission. A copy of the survey and a summary of the findings can be found in Appendices D and E.

Based upon this data collection, the project team developed three alternative master planning options, ranging in level of development and cost. Presented at a second community workshop, and at a subsequent meeting with the Parks and Recreation Commission and Steering Committee, the project team

then refined the plans into the recommendations presented in this report.

2.3 REPORT ORGANIZATION

The report is divided into three sections. Section I describes the project background and documents existing park and recreation opportunities available to residents of Signal Hill. Section II assesses the City's recreational acreage and facility needs. Section III provides a detailed description of the project master plan, including the financing of improvements and recommended phasing for implementation.

CHAPTER THREE
PROJECT CONTEXT

Chapter Three will describe the project context and major planning efforts that proceeded the development of the Parks and Recreational Master Plan.

3.1 REGIONAL & LOCAL SETTING (Figure 3.1 and 3.2)

The City of Signal Hill is located in the Southeastern portion of Los Angeles County eighteen miles south of downtown Los Angeles and 2.5 miles north of the Pacific Ocean. Signal Hill (covers an area of 2.25 square miles.) and is surrounded by the City of Long Beach.

The city's "Hill" is a regional landmark which offers panoramic views of the Pacific Coast, the San Gabriel and Santa Ana Mountains, Long Beach, and much of the greater Los Angeles Basin. Regional access to the city is provided by the San Diego Freeway (Interstate 405) which crosses the city at its northern edge.[1]

3.2 RELATIONSHIP TO OTHER PLANS

The Signal Hill Parks and Recreation Master Plan is closely related to a number of other plans for the city and in adjacent communities that involve recreation and land use planning. The most significant of these are listed as follows along with their relationships to this master plan.



Figure 3.1

0 3 6 MILES

City of Signal Hill Parks and Recreation Master Plan

Regional Location

SOURCE: SIGNAL HILL GENERAL PLAN

pod

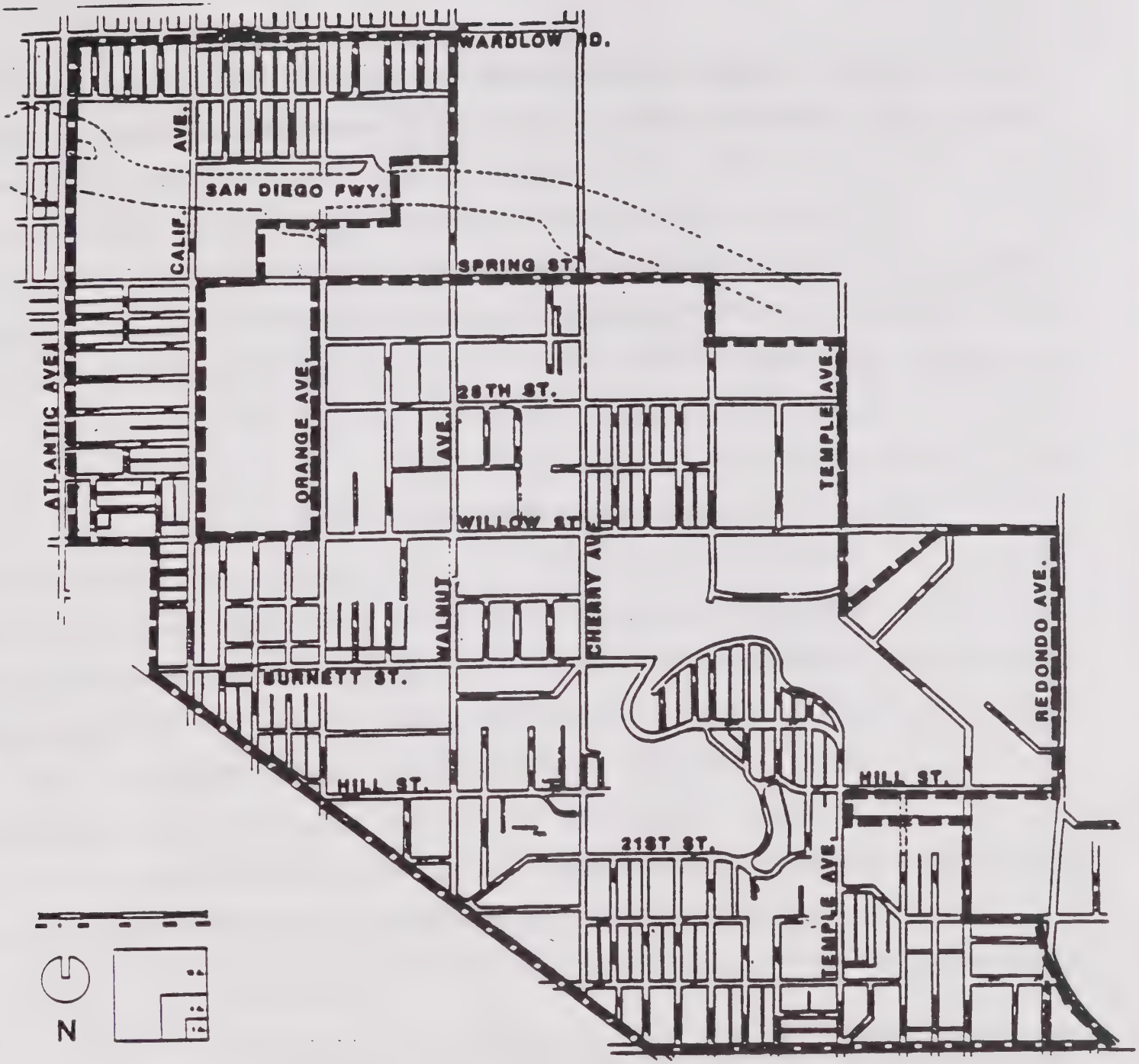


Figure 3.2

City of Signal Hill Parks and Recreation Master Plan

City Boundaries

3.2.1 Signal Hill General Plan Environmental Resources Element

As a major means of allocating and reserving land for future park uses, the General Plan-Environmental Resources Element, Section F and parts of Section G are closely linked to the contents of this master plan. In essence, this element should be a summary document that contains many of the major policies outlined in the Signal Hill Parks and Recreation Master Plan.

3.2.2 Capital Improvements Budget

Each year Signal Hill adopts a capital improvements program and budget. In this program, all major expenditures for capital facilities including park land and facilities are set forth for the following year. Adoption of the program authorizes the expenditure of public funds for new and existing recreation facilities, equipment and programming. The Signal Hill Parks and Recreation Master Plan is intended to provide the City with a clear picture of future funding needs.

3.2.3 Parkland Dedication/Fee Ordinance

The Signal Hill Park Dedication/Fee ordinance was enacted pursuant to Section 66477 of the Subdivisions Map Act, known as the Quimby Act. The intent of the Act, and of the city's ordinance, is to maintain appropriate levels of parkland and open space while accommodating new development. Section III of the Master Plan will address the current fee and dedication

structure with recommendations for modifications that will help the city fulfill its future park and open space needs.

3.2.4 Hilltop Specific Plan

The Hilltop Specific Plan Adopted in 1983 is a policy document which will guide the development of a 30 acre hilltop site. The site is one of the city's prime undeveloped parcels of land and offers unparalleled views of both Long Beach and inland areas. The plan calls for a maximum development of 452 units of medium to high density residential housing.

The Open Space and Natural Resources element of the Hilltop Specific Plan seeks to achieve, through planned development, a high level of resource conservation, open space, and recreational opportunities.

Facilities for outdoor recreation within the Hilltop Site are encouraged in the Specific Plan in order to:

A. Provide recreational opportunities to benefit project residents.

B. Provide alternatives to the use of public parks to minimize the impact of project-generated use of existing parks.

C. Provide additional open space for aesthetic purposes.

D. Open Space and Natural Resources are to be conserved through the sensitive siting of buildings and the use of appropriate design techniques.

3.3 SIGNIFICANT PARKS AND RECREATION INFLUENCES

In addition to the plans described in the previous section, two other factors that greatly influence Signal Hill Parks and Recreation planning are the Long Beach Parks and Recreation System and Long Beach Unified School District elementary schools located in Signal Hill.

3.3.1 Long Beach Parks and Recreation System

Surrounding Signal Hill, the City of Long Beach offers many facilities that are utilized by Signal Hill residents. With 4726.65 acres of park land and extensive programming, Long Beach provides facilities and opportunities from which Signal Hill can benefit. Special consideration should be given to the location of Long Beach regional parks and specialized facilities such as golf and swimming along with Long Beach's planning efforts for a regional bike path system.

3.3.2 Long Beach Unified School District

Two Long Beach Unified School District (LBUSD) schools (Burroughs and Signal Hill Elementary) currently are located within Signal Hill, with a third being planned at the former site of the Southern California Military Academy just south of Signal Hill Park. The Signal Hill General Plan, Item 17, notes that the City of Signal Hill should make every effort to reach a shared use agreement with the LBUSD. At present, public access and use of these sites for recreational purposes is limited.

Given the large amount of currently developed recreational acreage located in district schools in Signal Hill, a strong effort should be made to secure an agreement that can maximize the recreational benefits from the city's two public schools. With improvements to the schools recreational facilities provided by Signal Hill, a shared use arrangement could offer benefits to both the city and the school district.

CHAPTER FOUR
EXISTING PARK AND RECREATION FACILITIES AND PROGRAMS

This chapter will summarize the current mix of park and recreational facilities within and around the city.

4.1 EXISTING CITY PARKS & RECREATION FACILITIES (Figure 4.1)

The City of Signal Hill currently has 14.55 acres of developed and undeveloped park land in 4 sites.

A. Signal Hill Park (Figure 4.2)

The largest of the city's parks is Signal Hill Park (previously Hinshaw Park) with 10.07 acres. Located at Cherry Avenue and 21st Street, the park site is shared by the City Hall, a public library, a small community center building and the police department. Signal Hill Park contains the only active recreational facilities provided by the city. They include Spud Field; a lighted softball diamond used for tournament, league and informal play, a bandstand used for summer concerts; restrooms, a tot-lot and a half basketball court. Given the park's size and the facilities provided, it is not surprising that it is the most heavily used of the city's parks.

B. Reservoir Park (Figure 4.3)

Reservoir Park is 2.78 acres and is located between Wardlow Road and 33rd Street and Brayton and Gundry Avenues. A water reservoir and related facilities totaling 1.4 acres are located at the southern end of the site. The park provides for passive recreation with picnicking, a children's play area and limited open space for unstructured play. Restrooms are provided.

C. Hillbrook Park (Figure 4.4)

Hillbrook Park is .54 acres and is located at Wall Street and Temple Avenue. Hillbrook, a small "vest pocket" park, has a water feature as its focus and offers a covered picnic area, barbecue facilities, a tot lot and restrooms.

D. Legion Park (Undeveloped)

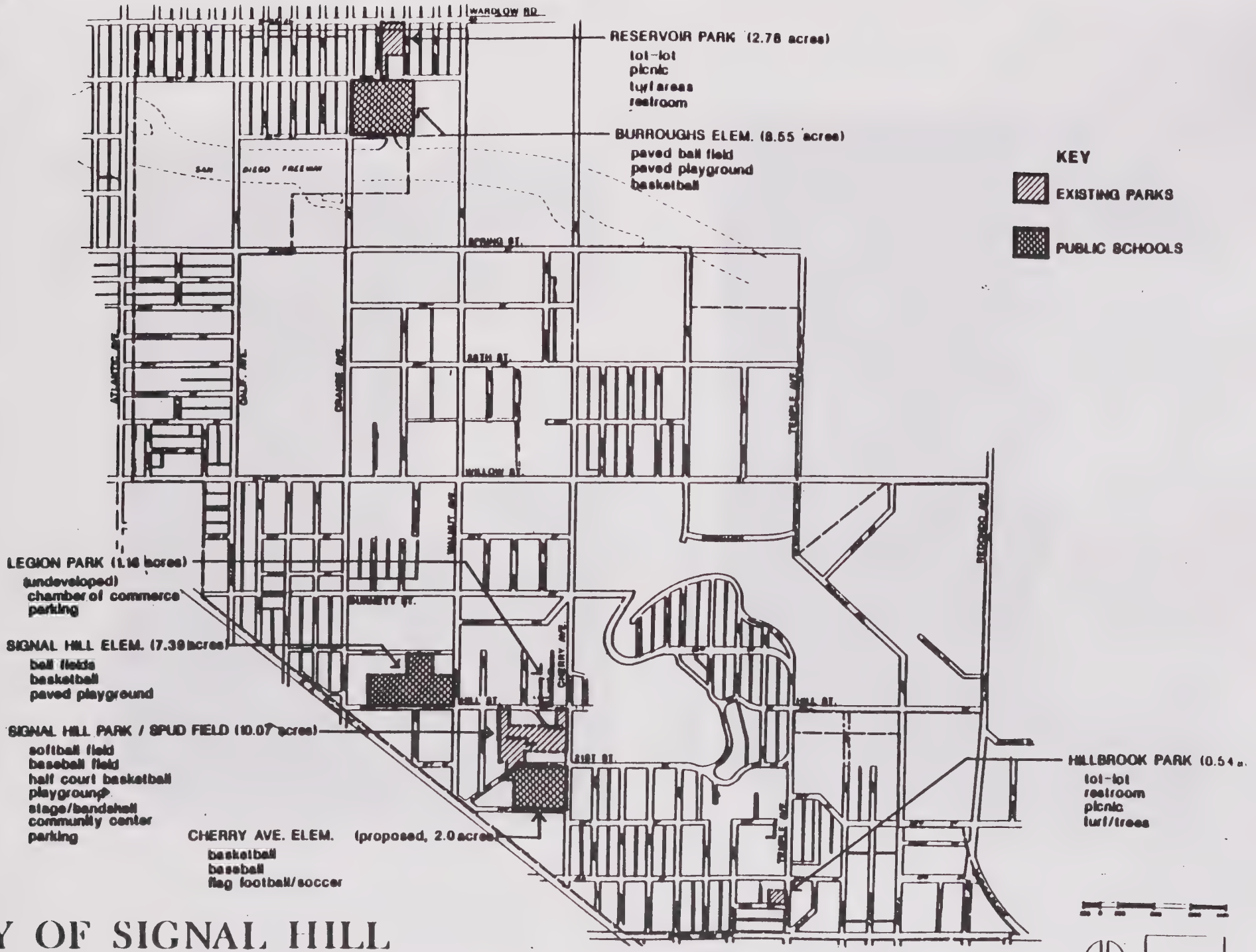
Legion Park, which is located directly across the street from City Hall is 1.16 acres, .35 of which is developed with a Chamber of Commerce building and a city parking lot. The remaining area is vacant with no immediate plans for development. Table 4.1 is a summary of Signal Hill's current parks and facilities.

TABLE 4.1

SUMMARY - EXISTING SIGNAL HILL PARKS

Name	Location	Acreage	Existing Facilities
Signal Hill Park	Cherry Avenue at 21st Street	10.07	Softball diamond tot lot, half basketball court outdoor stage, City Hall, publi buildings.
Reservoir Park	Between Wardlow and 33rd, Brayton and Gundry	2.78	Water reservoir and related facilities, picnicking, a tot lot and passive recreation.
Hillbrook Park	Wall Street and Temple Avenue	0.54	Water fea[illegible] tot lot, pic[illegible] facilities and passive recreatic
Sub Total, Developed Parks:		13.39	
Legion Park (Undeveloped)	Hill Street at Legion Drive	1.1	Parking lot, Chamber of Comme Building
TOTAL		14.55	

Source: Signal Hill General Plan



CITY OF SIGNAL HILL

PARKS & RECREATION MASTER PLAN

EXISTING PARKS & OPEN SPACE

Figure 4.1



Signal Hill Park



Spud Field

Figure 4.2



Reservoir Park



Reservoir Park

Figure 4.3



Hillbrook Park



Hillbrook Park

Figure 4.4

4.2 SCHOOL PLAYGROUNDS

There are two public schools located in Signal Hill, with a third being planned for development, all of which are under the jurisdiction of the Long Beach Unified School District.

A. Signal Hill Elementary School (Figure 4.5)

Signal Hill Elementary School is located at the corner of Walnut and Hill Street and has 7.39 acres available for recreational use during school hours. The majority of the site is paved asphalt. Facilities include a softball field, 4 youth basketball courts, a backstop for handball and play equipment. No night lighting is provided.

B. John Burroughs Elementary School (Figure 4.5)

Located at Orange Avenue and 32nd Street, this facility has 8.55 acres of open space available for recreational activities, all on asphalt. Facilities include a backstop and two youth basketball courts and play equipment. No night lighting is provided.

C. Cherry Avenue Elementary School (Proposed)

Plans are being completed for the development of an elementary school to be located adjacent to Signal Hill Park at the former Southern California Military

Academy site. Recreational facilities being planned comprise approximately 2 acres of the site and include a practice softball field and turf play area, 3 basketball courts, and an assortment of play equipment and game areas on asphalt and rubber matting.

The total existing and proposed recreational acreage, for all public schools in Signal Hill totals 17.94 acres. While this is a relatively large amount of acreage, both existing schools are only available for limited permit and supervised use after school hours. In addition to fencing in the schoolyard, limited access and restrictive signage discourage use. As a result, the schools offer few recreational opportunities for Signal Hill residents as they currently exist and operate.

The city has set a priority to establish an agreement that will allow for greater public use of this existing recreational acreage. The Signal Hill General Plan, (Environmental Resources Element, Goal 3, Policy 3.4) states that the city should "coordinate with the Long Beach Unified School District to ensure the availability of school recreational facilities for public recreation after school hours." For a listing of public school recreation facilities in Signal Hill, See Table 4.2.



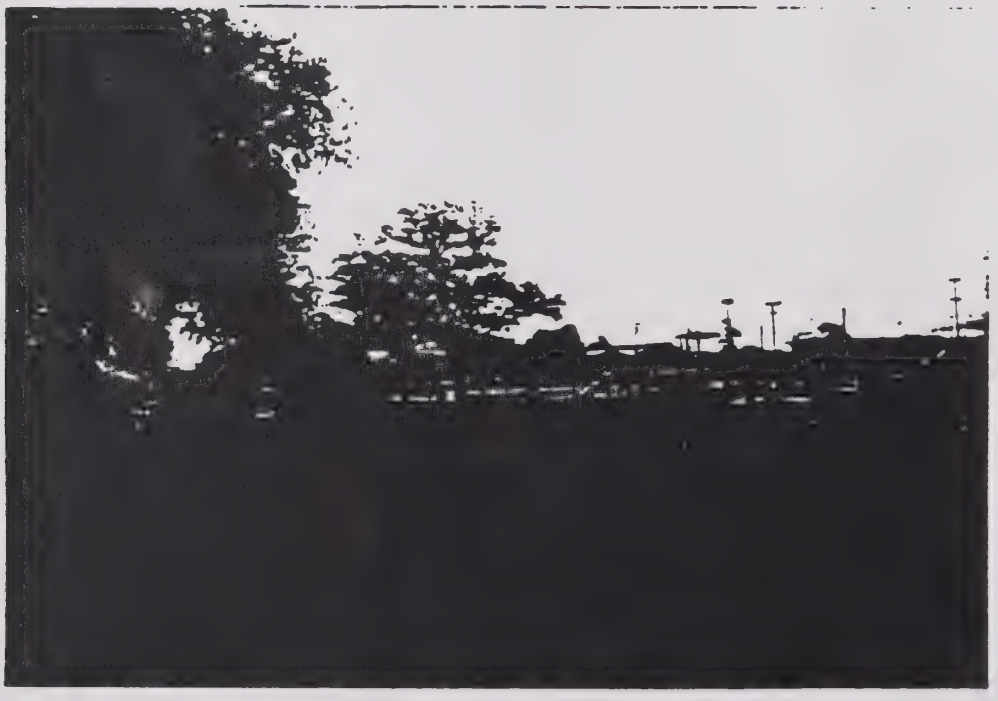
Signal Hill Elementary School



Signal Hill Elementary School Figure 4.5



Burroughs Elementary School



Burroughs Elementary School Figure 4.6

TABLE 4.2

PLAYGROUNDS

Schools	Recreational Acreage
Signal Hill Elementary School	7.39
Burroughs Elementary School	8.55
Cherry Avenue Elementary (Proposed)	2.00
	17.94 Acres

4.3 LONG BEACH PARK AND RECREATION FACILITIES (Figure 4.7)

The consideration of recreational opportunities for residents of Signal Hill will include a review of adjacent Long Beach Parks and Recreation facilities. Three Long Beach parks are located within a 1/2 mile of the Signal Hill borders; they total 21.5 acres and offer a number of facilities including a community swimming pool, 2 tennis courts, basketball, and a softball/soccer field (see table 4.3). It is important to note that while these parks are within close proximity, they do not serve large residential areas of Signal Hill. In the case where a Long Beach park is within a 1/2 mile of a Signal Hill neighborhood, Signal Hill Park is typically the park of choice with the exception being for the use of facilities not found at Signal Hill Park.

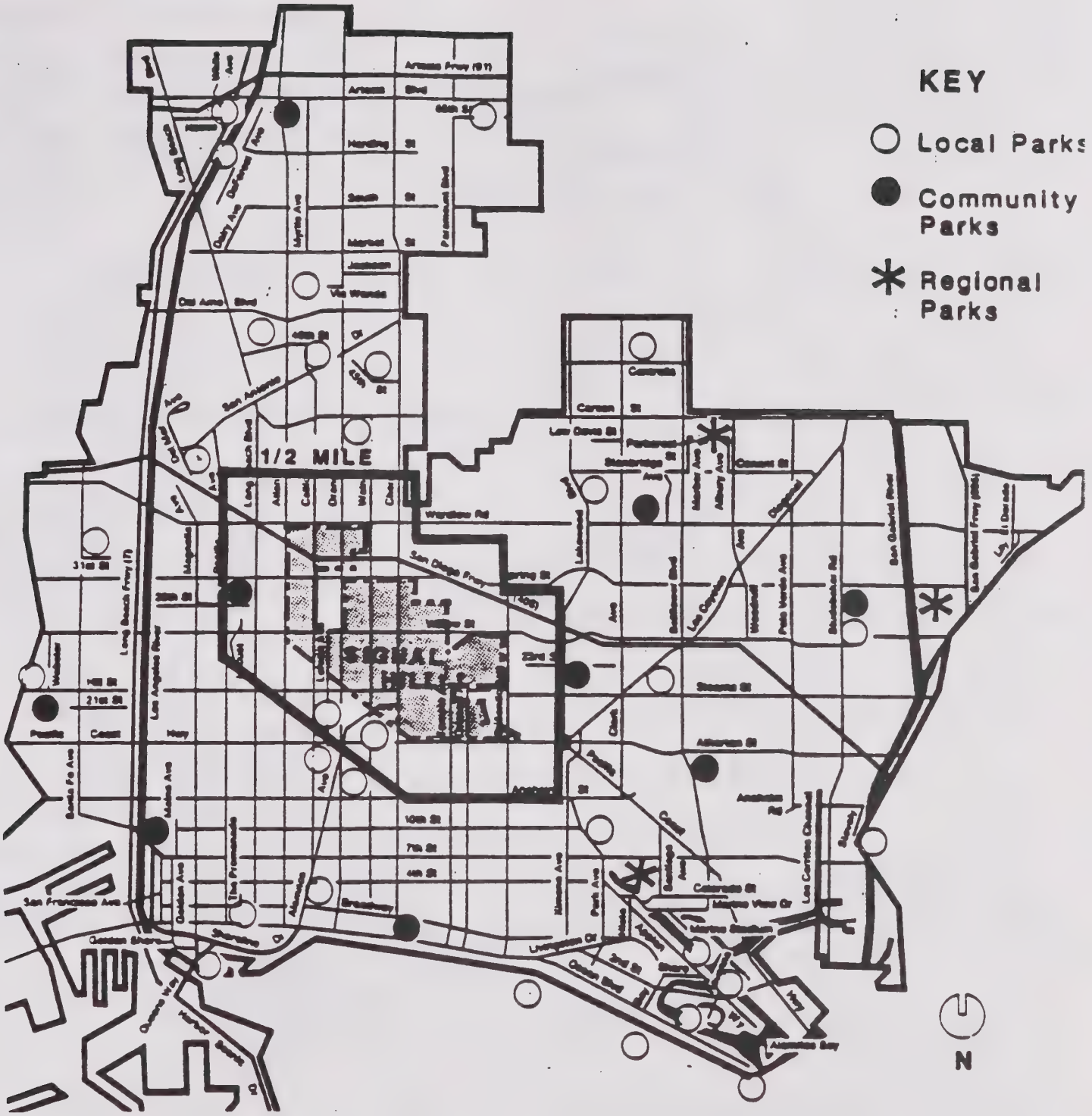
The most significant components of the Long Beach park system for Signal Hill residents are the regionally serving facilities. These include three regional parks totaling 870.8

acres all of which are within 4 miles of Signal Hill. With the recommended service radius for regional parks being one hour driving time, Signal Hill's regional park needs are satisfied. These regional parks provide a number of specialized facilities including archery, fishing, golf, an amphitheater, a nature center and large areas of landscaped open space. In addition, coastal beaches are located 20 blocks to the south of the city.

4.3.1 LONG BEACH AND REGIONAL BIKEWAY SYSTEMS

A final regional component is the county and Long Beach Bikeways Systems which will eventually connect the San Gabriel and Los Angeles River Bikeways and extend to the existing Marina and Shoreline Aquatic Park. This segment is a component of the larger Los Angeles River Bike Trail. Upon completion, the bikeway system will cover between 60 and 70 miles. [3]

Links being planned to complete this system include options that could cross the City of Signal Hill or extend along its borders. The Signal Hill general plan establishes the need to "encourage alternatives to the private automobile by increasing accessibility to public transit and developing a pedestrian and bicycle system." Coordination with the City of Long Beach in the development of a bikeway system is also emphasized in the City's general plan. (Circulation Element, Policy 1.14)

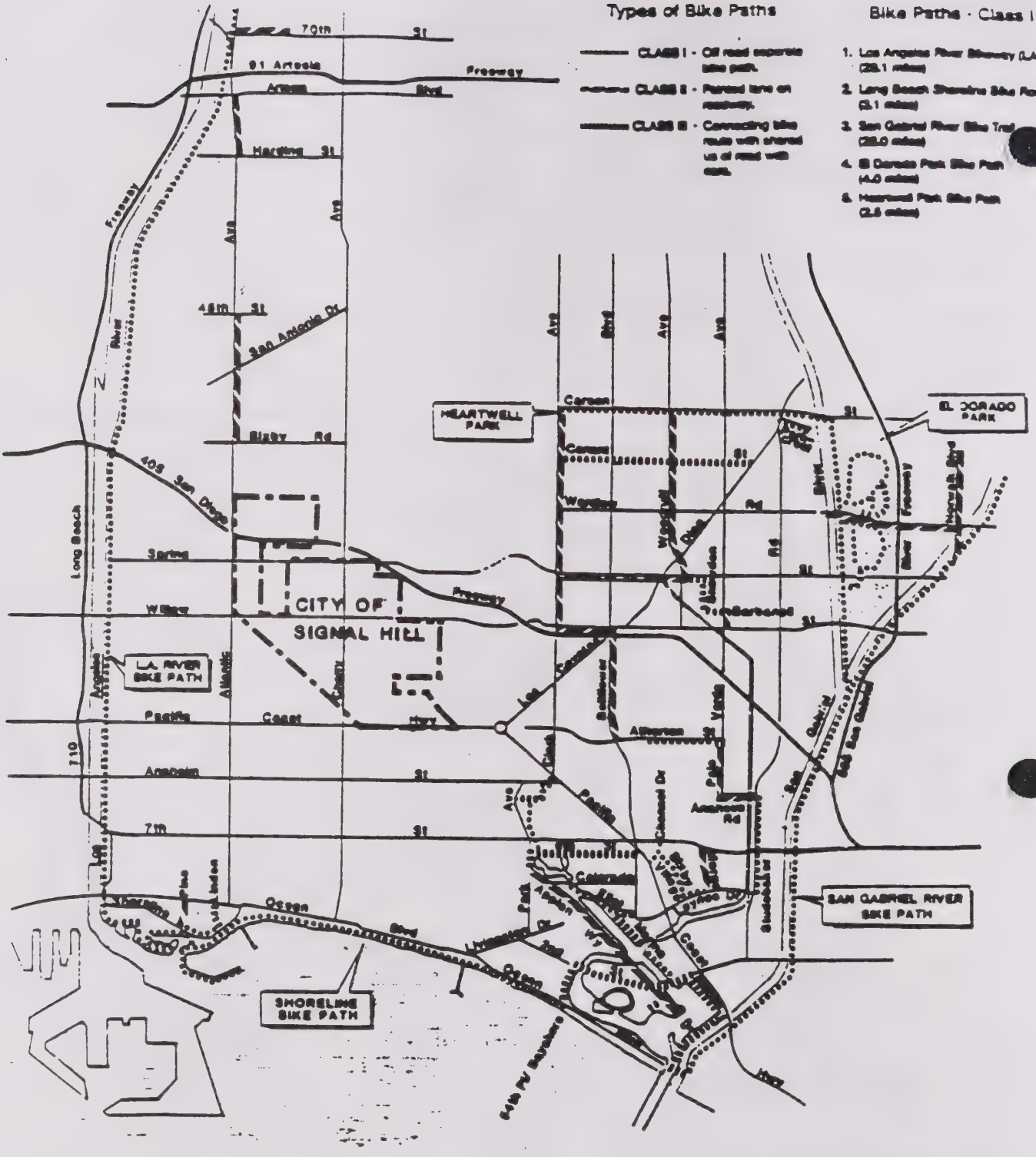


Long Beach Parks

Figure 4.7

Existing Recreational Facilities
SOURCE: CITY OF LONG BEACH

pod



Long Beach and Regional Bike Systems

Figure 4.8

Existing Recreational Facilities

SOURCE: CITY OF LONG BEACH

TABLE 4.3

Long Beach Parks

A. Parks within 1/2 Mile Name	Size	Major Facilities
Martin Luther King Jr. Park Community Center	6 Acres	Pool Softball, Basketball, Softba.
Orizaba Park	1.20 Acres	Passive Recreation
Veterans Park	14.30 Acres	Community Center, Tennis, Soccer, Basketball, Softba.
Chittic Field (L.A. County)	18.00 Acres	Four Lighted Softball Fields
B. Regional Parks		
Name		
Colorado Lagoon/ Recreation Park	261.00 Acres	Lagoon and Associated Facilities, Golf, Tennis, Basketball, Softball
El Dorado East	185.00 Acres	Lake, Fishing, Nature Center
El Dorado West	267.00 Acres	Tennis, Golf, Playfields, Soccer
Heartwell Park	157.80 Acres	Golf, Basketball, Volleyball, Soccer

4.4 COUNTY, COLLEGE AND PRIVATE FACILITIES

Other facilities in the Signal Hill area include county owned Chittic Field, Long Beach City College and the privately run American Gymnastics Academy. Chittic Field, located at the city's southern edge, has 4 lighted softball fields, maintained and operated by Long Beach City for adult softball league use. City College has 11.70 acres for recreation including a gym, soccer fields, tennis and a pool facility. These facilities are available for City College students only during the school year. During the summer, the facilities are open for limited public use. The American Gymnastics Academy is a privately operated indoor facility located in Signal Hill. The Academy offers a number of classes and activities for all age groups.

4.5 RECREATION PROGRAMS

4.5.1 Signal Hill Community Services Department Programming

The Signal Hill Community Services Department provides a variety of cultural, recreational, and educational programs for citizens of all ages. The majority of programs and classes offered by the department take place at Signal Hill Park, with other activities held at Burroughs Elementary School and the privately run American Gymnastics Academy. The following will summarize the various programs provided by the Community Services Department.

A. Youth Recreation Programs

The Summer Recreation Program at Signal Hill Park and Burroughs Elementary School offers supervised daily activities geared for youths from ages 6-13 years. The program is free with the exception of specially planned field trips and excursions.

The program is popular and well attended, with over a hundred children participating on a typical summer day. Hours for the summer program are from 10:00 a.m. - 6:00 p.m. Monday through Friday and from 12:00 noon - 4:00 p.m. Saturday. During the school year hours are from 2:30-5:00 p.m. Monday through Friday and on Saturday from 12:00 noon to 4:00 p.m.

A teen program is available for youths aged 13-18 years. The program is based on Teen Night which takes place every Friday evening from 7:00-9:00 p.m. in the Youth Center. In addition to the programs scheduled each evening, monthly excursions are also offered on evenings or weekend days.

B. Special Interest Classes

The Community Services Department offers a variety of special interest classes for youths and adults throughout the year. A sampling of the classes offered includes karate, jazzercise, gymnastics, ballet, dance, tiny tumbling and a variety of exercise classes. Classes are by registration with fees on a per class, or monthly basis.

C. Senior Citizens

Senior Citizens in Signal Hill are provided with a number of services and programs, including group excursions, free exercise classes, free transportation within the city for those 62 and over or disabled, and a number of nutrition programs for low income seniors.

D. Softball Leagues

From April to October, adult softball leagues are held at Spud Field in Signal Hill Park. There is a men's slow pitch league and a co-ed slow pitch league. All games are held on weekday evenings. Fees are charged to cover umpire fees, medical benefits, awards, balls and lighting.

E. Special Events

Throughout the year a number of special events are offered by the City of Signal Hill. The Concert in the Park series takes place between July and August. Held at the Signal Hill Park bandstand, the program features a series of evening concerts typically held Wednesdays between 6:30 and 8:30 p.m. The Concert in the Park series is a popular and successful program.

The RoughNeck Roundup is an annual celebration commemorating the city's rich history. The Roundup held in August is in its tenth year. Activities include a 5 and 10-k run, games, rides, displays, arts and crafts, music and food. Other special events are sponsored by the Community Services Department to celebrate major holidays including Halloween, Christmas and Easter. The facility locations for all of the classes and programs provided by the department are listed as follows:

- American Gymnastic Academy, 2749 Temple Avenue, Signal Hill
- Community Center, 1780 E. Hill Street (Signal Hill Park)

- Youth Center, 1780 E. Hill Street (Signal Hill Park)
- Burroughs Elementary School, 3315 Gundry Avenue, Signal Hill

4.5.2 Commercial Recreation

The American Gymnastics Academy is a large commercial recreational facility located in the city of Signal Hill. The 14,000 square foot facility houses a gym, dance room, and a learning center. Programming is very comprehensive and includes a summer day camp, foster care program, self-defense, senior exercise, gymnastics, body shaping and classes for the physically and mentally disabled. The Academy offers 90 hours of programming per week for up to 500 people. Users include a large percentage of senior citizens and small children, with a majority of users in the 6-13 year age group.

Many of the special interest classes provided by the Signal Hill Community Services Department are conducted by the Academy on a fee sharing basis. Hours at the Academy are weekdays from 7:30 to 9:00 p.m. and Saturdays from 8:30-6:00 p.m. Monthly memberships are available.

4.5.3 Private Recreation

There are three YMCA's within a convenient servicing distance to Signal Hill. The Downtown Long Beach YMCA located at Long Beach Boulevard and 6th Street, the Los Altos YMCA on the corner of Bellflower and Atherton and the Wiengart - Lakewood YMCA at the corner of Bellflower and Carson. All three facilities have pools, a variety of equipment and recreational programming opportunities. The pools can be used on a pay-per-visit basis. Classes are available to members and non-members with membership offering discounts for classes and access to the full array of available equipment.

4.5.4 Long Beach City College

Located at 4901 East Carson Street, Long Beach City College has a full variety of recreational fields and facilities on campus that are available for students. Classes, tournaments and intermural sports are offered throughout the school year. Summer programming is available for area youths ages 5-17. Summer recreation programming runs for seven weeks and includes use of the swimming pool and a number of sports camps for gymnastics, soccer, football, volleyball, basketball and cheerleading. All classes and use of facilities are on a fee basis.

4.5.5 Sierra Club

The Long Beach chapter of the Sierra Club holds an official Sierra Club hike in Signal Hill, Tuesday and Thursday evenings and Saturdays. Participants are broken into slow, medium, and fast groups for a 1-5 mile conditioning hike that tours the Hill area of the city. The number of attendants range from 30-70 per hike. The hikes are free and are open to the public.

4.5.6 Organized Youth and Adult Sports

A. Long Beach Youth Soccer (LBYSO)

The Long Beach Youth Soccer Organization serves the greater Long Beach area including Signal Hill. Available to boys and girls 5-18 years of age the organization runs its league from September through December including a 2-4 week tournament that is run in January. Fields used include Marshall, De Mille, Hughes Jr. Schools, and Lakewood High along with Long Beach City Colleges.

B. American Youth Soccer Association (AYSO)

The American Youth Soccer Association serves much of the same area as the Long Beach Youth Soccer Association which also includes Signal Hill. League divisions for Signal Hill youths are #114 and #177. AYSO is available to ages 5-20 years

The league runs from the first of August to the end of January. Fields used by AYSO are located at Heartwell, Wardlow, El Dorado, Stearns, Marina Vista and Waley Parks as well as Milliken High School.

C. Kids Baseball Association

The Kids Baseball Association has both junior and senior leagues with ages from 10-13 and 14-15 years. The season runs from mid-June to August. Signal Hill participants play at the following locations; Cherry Park, Hamilton Bowl, Lakewood and Milliken High School and Spud field.

D. Kiwanis Tee Shirt League

This youth baseball league is for youths 8-11 years of age. The league runs from February to June. Games are played at Hughes Junior High School.

E. Long Beach Little League

Long Beach Little League is for ages 6-16 years and runs from January to June. Games are played weekday afternoons and weekends at Stearns Park.

F. Heartwell Bobby-Sox

Heartwell Bobby-Socks baseball league is for girls ages 5-16 years. Games are played primarily at Heartwell Park or weekday afternoons and weekends from April to June.

G. Long Beach Women's Soccer Association

The Long Beach Women's Soccer Association has three separate divisions for women 18 years of age and over. Games are held at Heartwell Park. The league runs from winter through spring.

H. Long Beach Men's Soccer Association

The Long Beach Men's Soccer Association also meets at Heartwell Park. Scheduling for the men's league also runs from winter through spring.

CHAPTER FIVE
FACILITY NEEDS ASSESSMENT

Chapter Five will analyze Signal Hills existing park and recreation components, identify parkland acreage needs along with locational and facility needs for current and projected populations based on national and regional recreational standards. Chapter Six will focus on the specific recreational patterns of Signal Hill residents, including their opinions and preferences regarding future plans for Parks and Recreation in the city.

5.1 PARK LAND ACREAGE NEEDS

Signal Hill's General Plan has a goal of 4 acres of parks per 1,000 city population. This figure is comparable with the standards provided by the National Recreation and Park Association and by the Los Angeles County Parks system. Table 5.1 lists the most recent standards available for communities adjacent to Signal Hill. Based on a goal of 4 acre/1,000 and a projected population at build-out of 12,000, Signal Hill's park acreage should eventually total 48 acres. Table 5.2, Summarizes Signal Hill Park Land Acreage Needs.

TABLE 5.1

PARKLAND ACREAGE STANDARDS

	Acres Per 1000 Population
Signal Hill	4/1000
Anaheim	2/1000
Lakewood	4/1000
Long Beach	10/1000 (4/1000 local parks, 6/1000 regional)
Los Alamitos	4/1000
Paramount	1/1000
Whittier	4.5/1000
L.A. County	10/1000 (4/1000 local parks, 6/1000 regional)
Orange County	4/1000
National Recreation & Parks Association	10/1000 (4/1000 local parks 6/1000 regional)

SIGNAL HILL PARK LAND ACREAGE NEEDS

TABLE 5.2

General Plan: Requires 4 Acres/1000 population for parks and recreation and open space.	
Current Park Acreage:	14.55 Acres
Signal Hill Schools:	17.94 Acres
Total Current Open Space:	30.49 Acres
Current Need: 4 x 8300 Population =	33.20 Acres
Projected Need: 4 Acres x 12,000 =	48.00 Acres
Current park and open space need:	2.71 Acres
Projected acreage need at buildout population of 12,000:	17.51 acres

5.2 DEFINITION OF PARK TYPES

The definition of park types is an important element of the master plan. The definitions of park types reflect public attitudes and policies towards the provision and development of park and recreation facilities. The classification of a park type is a expression of the function it is intended to provide. This function is often described in an hierarchal order, reflecting the extent of the intended service areas, from the most localized to the more distant.

A review of Table 5.3 reveals that the most appropriate park type for Signal Hill, due to its size and population are the mini park, neighborhood park, and community park. Regional park needs intended to serve greater areas and populations are currently provided within Long Beach. Table 5.3 summarizes the Park types appropriate to Signal Hill.

Table 5.3

Summary Definitions of Park Types

---

1. Mini Park

Use:	This facility functions best in areas of medium to high density housing or commercial uses where it becomes a substitute for a backyard or a retreat amid heavy vehicular congestion. Mini parks might take the form of children's play lot, a city's entry feature, a small downtown plaza, or a vest pocket park.
Service Area:	Less than 1/4 mile radius
Size:	One acre or less
Characteristics:	Located in close proximity to apartment complexes, townhouse development, or housing for the elderly.

2. Neighborhood Park

Use:	Neighborhood parks are intended to provide for daily recreation needs of residents in the immediate area of the park. Should provide a variety of passive and active recreation opportunities. Facilities might include: picnic areas, tot lots, court areas, a multipurpose ball field(s), and limited parking. Active recreation facilities are intended for informal "pick up" games as opposed to organized league play.
Service Area:	Less than 1/4 to 1/2 mile radius dependent upon population density.
Size:	Up to 10 acres

Table 5.3

Definitions of Park Types for the City of Signal Hill (Continued)

Characteristics:	Can be developed adjacent to or in joint agreement with a school. Located for easy assess to the neighborhood it serves emphasizing walking and bike access.

3. Community Park

Use:	A community park should provide areas of diverse activities and environmental quality to service an entire community. Provides either or both active and passive recreation opportunities. Active recreation opportunities include swimming pools, tennis, ballfields and community serving recreation building(s). Passive activities include the conservation of natural areas, picnicking, strolling, and jogging paths.
Service Area:	Several neighborhoods; Service radius of 1 to 2 miles
Size:	15 to 25 acres
Characteristics:	The service area of a community park includes the entire city. The park should be centrally located and provide adequate parking for the number and type of facilities located at the park.

4. Linear Park

Use:	Areas developed for one or multiple methods of recreation travel including hiking, bicycling, and horseback riding. May contain active and passive recreation activities. Recreation pathways play an important role in the development of a well integrated park system.
Service Area:	Not applicable

Table 5.3

Definitions of Park Types for the City of Signal Hill
(Continued)

Size:	Of sufficient width to provide safe use and minimize impacts to adjacent land uses.
Characteristics:	Physical characteristics vary dependent upon the intended uses and available corridors. Corridors often used include utility easements, railroad alignments, and natural drainage courses.

5. Regional Park

Use:	Provides for a variety of active and passive recreation.
Service Area:	Region wide.
Size:	The population located within one hour driving time from the park facility. Parks can range in size from a few acres to over 1,000 acres.
Characteristics:	Unique, varied recreational activities are offered with the goal of attracting a wide range of park users.

5.3 FACILITY NEEDS

Determining facility needs is a difficult and complex task. Local preferences, combined with regional and national standards provide a basis by which need can be determined. Table 5.4 shows the current need for facilities by type when the existing inventory of facilities is compared to National Recreation and Park Association Standards (NRPA) based on number of facilities per thousand population. The table indicates the "deficit" based upon the cities current population, and also at a projected build-out population of 12,000, assuming no new facilities are built. Deficit figures listed are meant to give a general indication of need based on NRPA Standards. For example, a .83 deficit for a soccer field suggests that the addition of a soccer field should be considered.

The table indicates that by these standards, the City of Signal Hill is largely operating at a "recreation facility" deficit. It is important to note that these standards are meant to serve as general guidelines and should be interpreted in the context of specialized locational needs and the opinions and desires of city residents. Signal Hill's location, as stated in the previous chapter leaves the city well served by regional parks, and facilities typically serving a wider area such as golf, swimming, racquetball, and archery.

Due to currently limited access, and the size and condition of school recreational facilities, Signal Hills schools have not been included in Table 5.4. What should be considered is that with renovations and changes in policy these school facilities would significantly contribute to the city's currently limited supply of courts and fields.

TABLE 5.4

SIGNAL HILL PARKS & RECREATIONAL MASTER PLAN
RECREATION FACILITY STANDARDS AND NEEDS

FACILITY	Radius	(N.R.P.A) Sig. Standard	Hill Sig. "Actual"	Hill "Deficit"	Deficit "Per Build-Ou
Tennis	1/4-1/2 mi.	1 per 2,000	0	4.15	.6 courts
Soccer Fields	1-2 mi	1 per 10,000	0	0.83	1.2 fields
Basketball courts	1/4-1/2 mi.	1 per 5,000	1/2 ct.	1.66	2.4 court
Softball	1/4-1/2 mi	1 per 5,000 min	1	1.66	2.4 fields
Volleyball	1/4-1/2 mi.	1 per 5,000	0	1.66	2.4 courts
Swimming Pools .25 yard .50 meter	15-30 min. travel time	1 per 20,000	0	0.41	0.60 Pools
Golf - 18 hole	1/2-1 mi.	1 per 25,000	0	0.33	0.48 Courses
Baseball	1/4-1/2 mi.	1 per 5,000	0	0.66	1.4 Fields
Trails	N.A.	1 per region	0	N.A.	1 Trail
Racquetball/ Handball	15-30 min. travel time	1 per 20,000	0	0.41	0.60 Courts

Source: National Recreation and Parks Association

Note: The deficit indicates the mathematical calculated storage. In realit
a facility would either be fully built, or not built at all.

5.4 SUMMARY CONCLUSIONS AND RECOMMENDATIONS

Based upon our analysis of public, private or nearby park and recreational facilities, a number of conclusions can be drawn.

1. There is a need for park facilities in selected, under-served areas, particularly in the Burnett Avenue and future Hathaway Avenue areas.

2. Signal Hill is currently operating at a slight park and open space "deficit". In the future, given the 4 acre per 1,000 population requirement for parks and open space, this deficit or need will grow to almost 18 acres.

3. There is a basis of need for tennis, basketball, and volleyball courts, along with soccer, baseball and softball fields.

SECTION II

CHAPTER SIX
COMMUNITY NEEDS ASSESSMENT

Chapter 6 will describe the results of the community mail survey.

6.1 OVERVIEW

A major step in developing the Parks and Recreation Master Plan for the City of Signal Hill is understanding the current recreational patterns of the residents, their opinions of the current Signal Hill park system and their preferences for improvements. To facilitate securing this information the project team conducted a mail survey of Signal Hill residents. A mail survey was considered the most efficient method for soliciting the opinions of the citizens.

Based upon preliminary meetings with the City staff and public workshop #1, a survey instrument containing 20 closed and open ended questions was prepared by the project team. This preliminary survey was reviewed by the Steering Committee and the Parks and Recreation Commission, whose comments were integrated into the final survey instrument. See Appendix B.

At the request of the City Council, the original mailing target of 2,500 residents was expanded to over 3,500 to accommodate all residents of the city. A current mailing list of Signal Hill residents was obtained from Orange County

Mailing Lists, and the surveys were distributed during the week of July 18, 1988. A follow-up post card, requesting that residents respond to the survey, was sent out to all residents one week later.

6.2 SURVEY RESULTS

A total of 3,564 surveys were mailed out. Of these, 281 (7.8%) were returned as undeliverable, mostly because the residences were "vacant". One can speculate that these are largely from apartments and condominiums. Of the surveys delivered (3,283), 763 were returned completed, a return rate of 23.2%. This rate is considered above average, and results in a confidence level of 95% at 3.5%. This means the results of the survey are generalizable to within 3.5% for 95% of Signal Hills population. For example, if we state 80% of those surveyed liked green grass, we can assume that the responses of 95% of <u>all</u> Signal Hill residents would result in an answer of 76% to 83.5%. A summary of the survey results can be found in Appendix E. The complete survey results and computer analysis are found in Appendix H.

6.3 SURVEY RESPONDENTS

The demographic profile of survey respondents indicates that they are largely comparable to the profile developed from available 1980 census data. The percentage of survey respondents by area within the city is comparable to the population density of these areas.

It is worth noting that over fifty percent of the respondents had lived in Signal Hill four years or less. This corresponds to the fact that 37% of the survey respondents rented or leased their current home, while 63.3% owned their home. The latest information available from the Department of City Planning indicates that 55% of Signal Hill residents own their homes, while 45% rent or lease.

In terms of income, the survey respondents were slightly above the 1980 census data. Due to the number of apartment and condominiums that have been built in the city since 1980 this increase is not unexpected. The median family income for survey respondents was $43,260, with 8.1% under $15,000 per year and 14% over $75,000.

In terms of age, the largest population represented was the 30-39 year old group. However, if we extrapolated the age in the survey and compared them to the current census data, we find that the survey respondents are remarkably similar to the census data.

6.4 CURRENT RECREATION PATTERNS

When asked what activities residents participated in during the last twelve months, the number one response was walking or hiking, with almost 82% undertaking these activities a few

times a year or more. Running and jogging was the second most frequent activity, followed by swimming, bicycling and attending fitness classes. Table 6.1 summarizes the findings. Note that column one (a few times a week), is the largest predictor of the true frequency that these activities are undertaken.

In reviewing these results it is interesting to note that the top two activities, recreational walking and running, do not require an actual facility, but are best accommodated by the provision of a system of paths and walks not requiring permanent structures. This also holds true for bicycling, the number four response.

TABLE 6.1

CURRENT RECREATION PARTICIPATION FREQUENCIES

ACTIVITY	A Few Times a Week (1)	A Few Times a Month	A Few Times a Year	Seldom o Never
Walking or Hiking	31.7	27.6	17.0	27.7
Running/Jogging	20.5	15.7	8.9	54.9
Swimming	18.6	18.9	16.4	46.1
Fitness Classes	15.2	12.9	9.8	62.2
Bicycling	14.1	19.4	21.9	44.6
Exercise Course	11.8	12.7	14.1	61.4
Tennis	8.5	9.7	16.3	65.4
Playgrounds	8.2	11.2	18.4	72.2
Classes for Children 1-9	4.5	4.1	3.8	87.7
Youths 10-19	2.5	1.6	2.5	93.5
Adults	7.8	6.8	17.1	68.4
Golf	6.5	9.7	11.5	72.3
Performing Arts	5.7	12.2	20.6	61.4
Basketball	4.6	8.2	11.6	75.7
Volleyball	3.5	7.7	17.4	71.4
Skateboarding	3.3	3.5	4.4	88.8
Roller Skating	3.0	5.4	11.5	80.1
Crafts Classes	2.8	6.8	14.8	75.6
Picnic	2.6	10.3	44.1	92.9
Softball	2.4	8.5	17.3	71.7
Baseball	2.2	3.7	10.7	83.4
Soccer	1.6	1.6	5.8	91.1
Football	1.2	2.5	12.2	84.1

(1) Percent of Respondents, N = 650

6.5 USE OF SIGNAL HILL PARKS

Not surprisingly, Signal Hill Park was the most frequently visited park, with almost half the respondents having visited the park in the last year. Reservoir and Hillbrook Park were, in all likelihood, less frequented by residents from the other side of town as a result of their geographic isolation in relation to the larger population.

When asked specifically about the parks closest to their homes, over 30% of respondents noted that they visited their local park at least a few times a month, reaffirming the concept that neighborhood parks provide a localized benefit. This is further confirmed by respondents' replies to the "best thing" about their park. Location was the number one reply, cited by 34.5% followed by clean and well kept, 12.6% and the landscaping and playground equipment, 6.8%. The size of the parks was a major complaint, with almost twenty percent of respondents noting they felt the existing parks were too small. Security is rated as less important. Table 6.2 indicates respondents rating of the Signal Hill parks.

Park users were most likely to walk to their local park (49%), followed by driving (17%) and bicycling (a surprising low 3.1%).

TABLE 6.2

RATING SIGNAL HILLS PARKS

	Good	Fair	Poor	Don't Know
Convenience of Location	59.5	17.5	5.6	17.5
Types of Facilities Within the Park	23.2	35.3	15.2	26.2
Landscape Attractiveness	37.4	34.2	10.2	18.2
Security/Qual. of Maintenance	34.2	35.7	7.0	23.1
Programs Available	19.4	21.2	13.0	46.3

Activities undertaken in Neighborhood Parks parallel overall recreation patterns, with strolling for enjoyment and jogging the number one and two responses. Picnicking was favored third, followed by participating in organized events or programs.

Table 6.2 indicates respondents' rating of the Signal Hill parks. Location is highly rated, as is the landscape attractiveness and general level of maintenance. Security is rated somewhat poorly.

6.6 SCHOOL FACILITIES

Almost 93 percent of the survey respondents (including their families) do not use either of the two school facilities in Signal Hill for recreational activities. Section 4.2 offers a discussion of the reasons for this low usage.

When they are used, Burroughs is more frequently used than Signal Hill Elementary (57.5 to 42.5 %). Basketball is the most frequently cited reason (36%, followed by running 10%). No other activities mentioned received over 3%.

6.7 FACILITIES OUTSIDE SIGNAL HILL

Almost one third of the respondents frequently utilized recreational facilities located outside of Signal Hill. Fifty four percent (54%) visited Long Beach's El Dorado Park (39.2%) and Recreation Park (10.4) were followed by the "beaches" (13%).

When visiting these facilities, picnicking was the most frequent activity. See table 6.3 for activities undertaken outside of Signal Hill.

TABLE 6.3

ACTIVITIES UNDERTAKEN OUTSIDE OF SIGNAL HILL

ACTIVITY	%
Picnicking	29.6
Walking	20.0
Biking	15.3
Tennis	11.1
Swimming	10.8
Golfing	9.2

Not surprisingly, 42% of those who left Signal Hill to participate in recreational activities did so because the Signal Hill facilities didn't offer the activity or programs they liked. Currently Signal Hill offers no large picnic areas, bike paths, tennis courts, pools or golf courses. Fortunately, these facilities, all expensive to build and maintain are available in nearby Long Beach.

6.8 NEW FACILITIES

Almost 50% of the survey respondents indicated Signal Hill needed more parks. 25% of the respondents believed the City did not need more parks while 25% were undecided. When asked what facilities would be most important to them, a viewing promenade on the top of the Hill was the first choice, followed by more landscaped open space/parks, strolling paths and bicycle paths. See Table 6.4 for a summary of new facilities desired.

TABLE 6.4

NEW FACILITIES DESIRED

FACILITY	PERCENT (1)
1. Viewing promenade/overlook on the Hill	43.6%
2. Strolling/jogging path	34.3
3. Bicycle paths	34.0
4. Community swimming pool	20.3
5. Tennis courts	21.6
6. Picnic areas	15.0
7. Exercise course	13.6
8. Tot lot/children's play areas	12.6
9. Baseball/softball fields	8.1
10. Gymnasium	7.5
11. Basketball courts	7.2
12. Indoor recreation center	6.7
None	3.4

(1) Multiple Answers Allowed, Respondents were asked to list their 3 top choices

The facilities desired by residents were consistent with residents current recreational patterns, (Table 6.1) where walking, jogging and bicycling were among the most favored activities.

Swimming was a highly frequented activity, and a community swimming pool was noted by 20% as a preferred new facility.

6.9 PROGRAMMING

When asked which type of educational and recreational programming they would like to see, residents selected entertainment, (mentioned by almost one third), and nature programs, (over 30%) as those they would most like to see. Sports, children's programs and arts and crafts programs followed in frequency of mentions.

6.10 SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Based upon the survey results, the following summarizes the major findings and recommendations to be considered in the development of the Parks and Recreation Master Plan.

1. Develop a facility on the top of the Hill that offers a viewing and a promenade experience.

2. Develop a path system for both recreational walking and jogging, that connects separate parts of town and park facilities.

3. The LBUSD school facilities located within Signal Hill are seriously underutilized.

4. Location is the number one neighborhood asset of open space in the city. New facilities should be located in areas not currently served by existing facilities and in the future, areas anticipating growth.

5. At the current time, organized recreational activities, soccer, baseball, football are being met apparently satisfactorily, by existing facilities, largely located within Long Beach.

6. Security in existing parks is a concern and needs to be considered in the development and upgrading of existing and new facilities.

7. Entertainment and nature programs are desired by residents. Residents are willing to pay a modest fee for these activities.

8. Long Beach Facilities, especially the regional parks are satisfying a great degree of Signal Hills recreation needs. Efforts should be made to continue a good relationship with the Long Beach Department of Recreation.

9. Residents, by a two to one margin, feel there is a need for more parks within Signal Hill.

10. The traditional demographics of Signal Hill are changing from an oil industry related working class to a service oriented, commuter residential population base. This new population base is likely to be more stable in nature, buying homes, having families and staying within Signal Hill for longer periods of time. Current resident values and recreation desires will need close observation to stay attuned to future residents desires.

CHAPTER SEVEN
OPPORTUNITIES AND CONSTRAINTS

Based on the major issues identified and an analysis of our findings, the following summarizes the most significant opportunities and constraints identified.

7.1 MASTER PLAN OPPORTUNITIES

1. <u>The Existing System of Parks</u>

   The City of Signal Hill's current park system, with Signal Hill Park as a central facility, and Reservoir and Hillbrook Parks, serving neighborhood needs, provides a good foundation for future expansion of the park and recreation system. There is considerable opportunity to maximize the role of these parks as the community evolves.

2. <u>The Variety of Sites Potentially Available for Recreation</u>

   Signal Hill has a variety of opportunities for the expansion of its park system with many areas of the city just beginning to open up for development. While some areas on the hill have development constraints due to steep slopes, they hold great potential for use as park land and open space. The slopes could be landscaped in native

plant materials or with informal planting and include trail systems and sites for viewing and passive recreation. Vacant sites closer to the city's developed areas have fewer constraints and offer possibilities for actively oriented recreational facilities.

3. Potential for City and Bikeway and Walkway Systems

The city's adjacency to a regional bikeway system offers potential for the development of a city bikeway system. Development of such a system could link park and recreational facilities throughout the city and join with the regional system. Where feasible, efforts could combine the bikeway with a city walkway system. The plan recommends a study of potential bikeways in the City and presents a proposal for a city walkway system.

4. Potential Funding Sources

Signal Hill currently has a system for collecting funding for park development outside of its general fund. Using the Quimby Act, Signal Hill has a system, in place, that requires the developers of new housing (where subdivision is occurring) to provide open space or fund open

space improvements. Industrial and commercial development, while contributing to the need for additional parks, has not been a source of park funding.

5. Cooperative Relationship with Long Beach Unified School District

The City of Signal Hill and the Long Beach Unified School District have cooperated and shared recreation facilities on a limited basis in the past. With a spirit of cooperation a number of opportunities exist for joint development and use of facilities. Some benefits of cooperation include improving current school facilities in the city and increasing the availability of the facilities for recreational use for residents of the area.

7.2 MASTER PLAN CONSTRAINTS

1. Fiscal Limitations

Land acquisition expenditures for new parks, the development of new or renovated recreation facilities, and increased park maintenance costs, must compete for limited city dollars. To the extent feasible, reliable alternate funding sources should be

developed. Efforts should also be made to insure a fair allocation of city funds for ongoing park and recreation needs.

2. Limits on Development Fees

While the opportunity to require new development projects to provide their "fair share" of recreational facilities, there is a limit as to how much they can be required to provide. Future development cannot be seen as a savior to make up for past recreation "deficits".

3. Topography

The topography of "the Hill," with a number of areas containing slopes in excess of 20%, poses a serious constraint to development. While the topography of some sites are less severe, most of "the hill" is characterized by steep slopes which are associated with high development costs and erosion problems. Despite these constraints, opportunities exist to utilize some of these areas for open space, greenbelts, trail systems and passive view parks.

SECTION III

CHAPTER EIGHT

Chapter 8 summarizes and describes the Master Plan recommendations.

8.1 OVERVIEW OF MASTER PLAN CONCEPT

The development of a comprehensive Master Plan for the City of Signal Hill has considered a number of factors that include: existing park and recreation opportunities, the needs and desires of residents, and the possibilities presented by the city's location and unique geography and character. As a result, a generalized concept of the types, style and specifics for a recommended plan have emerged. Guiding the specific recommendations are a number of principles which can be summarized as follows:

1. The Master Plan achieves the goal of providing 4 acres of parks and open space per 1000 population, today and in the future.
2. The Master Plan provides a park system within reasonable walking distance of all Signal Hill residents.
3. The Master Plan responds to the current recreation demands and desires of the residents of Signal Hill. Future needs and desires have been projected where our experience and localized preferences have deemed appropriate.

4. The Master Plan is implementable. The plan comprehensively represents improvements for which future funding opportunities have been identified.

5. The Master Plan takes advantage of Signal Hill's proximity to available nearby recreation facilities to fulfill portions of its recreation demand.

6. The Master Plan calls for the use of the extremely underutilized open space opportunities available at the Long Beach Unified School District facilities located within Signal Hill.

7. The Master Plan identifies those elements with the highest level of priority for implementation.

8. While being fiscally responsive, the Master Plan also outlines improvements which are desirable and for which available funding is not currently foreseeable.

8.2 SUMMARY OF RECOMMENDATIONS

The following is a summary of the major recommendations of the Parks and Recreation Master Plan.

1. <u>Acquire And Develop Parks in Residential Areas Not Currently Served By The Parks System</u>.
Specifically, develop new facilities along Burnett Street, Hathaway Avenue, the hilltop area, 21st Street, Hill Street and Gundry Avenue.

2. Develop a City Wide Walkway System

Using signs and maps, a city wide system of walkways is proposed linking various sections of the city to the major components of the park system and the hilltop area.

3. Develop Hilltop Parks For All City Residents

Taking advantage of the spectacular views, the Hilltop and the Reservoir Parks will serve local residents and visitors while serving as the major focal point of the walk and bikeway systems.

4. Upgrade Signal Hill Park

The focal point of the community's recreation and programmed activities, Signal Hill Park needs to be further upgraded and enlarged in order to meet its important role as a community park.

5. Utilize The Long Beach School District Facilities Located Within The City

The City of Signal Hill should participate in upgrading existing school facilities to take advantage of these underutilized assets.

6. Develop The Alamitos Well Site.

The Alamitos well site should be acquired, preserved and developed as a reminder of the city's history and as a key open space element.

7. Conduct Studies For The Development Of A Citywide Bike System

Connecting various sections of the City, the system would tie into the extensive Long Beach and County Systems.

8. Do Not Develop Legion Park

The proposed Legion Park property should be reallocated into other, non-park uses.

8.3 PRIORITIES FOR DEVELOPMENT AND ACQUISITION

The following section outlines a prioritized program for undertaking the implementation of the Master Plan. The order of improvements is based upon input from the project steering committee, the Parks and Recreational Commission and an evaluation of available funding along with consideration for the phasing of additions to the park system.

8.3.1 UTILIZE LONG BEACH SCHOOL FACILITIES LOCATED WITHIN THE CITY

Efforts should be made to arrange for a mutually beneficial shared use of school grounds for public recreation. These efforts should be aimed not only to open the sites up for greater use but also to explore the development and improvement of existing facilities, jointly, by the City of Signal Hill, or through a combined application for competitive state grants.

Signal Hill Elementary School currently has a partly developed softball field and a number of basketball courts that could be easily upgraded. Other improvements should include the removal of asphalt areas for replacement with turf, play facilities and other facilities determined most appropriate by the city, school district and nearby residents. Ultimately, a cooperatively developed comprehensive plan outlining improvements should be developed for both Burroughs Elementary and Signal Hill Elementary Schools sites.

Size:	90,000 square feet minimum turfed area per school.
Park Type:	Equivalent to small neighborhood park with open play areas, tot lots and limited active recreation.
Facilities:	Upgrade existing recreational facilities, basketball courts, ball fields.

Recommended Actions:

- Negotiate for shared use of school facilities.

- o Explore funding sources for the renovation of existing recreation facilities.
- o Secure comprehensive plans for renovations of Signal Hill and Burroughs Elementary Schools. Plan to consider facility upgrades, programming, night lighting and funding.

8.3.2 Acquire and Develop Parks in Areas Not Currently Readily Served by the Parks System

1. Burnett Street

The area around Burnett Street, West of Walnut, is a high density, residential area with a lack of conveniently accessible park facilities and open space, make the Burnett Street sites a #1 priority for park land acquisition.

Size: .75 - 2.00 acres

Park Type: A small neighborhood park with a service radius of 1/4 mile.

Facilities : As a minimum, the park should provide a tot lot, an open play area and some form of active recreation. Rest rooms and picnic facilities should also be considered.

Recommended Actions: As a high priority recommendation, the city should pursue the acquisition of a site in this area. A corner site visually open and easily monitored is recommended.

8.3.3 Develop Hilltop Park for all City Residents.

Develop a hilltop park for all city residents. A Hilltop Park and view promenade was the public's top choice for a park development as revealed by the Signal Hill Park and Recreation survey. The hill, with its panoramic views and currently undeveloped open space, provides a great opportunity for a park unique to the Los Angeles region. If views, open space and recreational opportunities are to be secured for the future, immediate and subsequent measures need to be taken for their conservation.

The Redevelopment Agency has previously acquired a site on the hilltop for a hilltop reservoir. This site is located on the north side of 23rd Street west of Davidson Avenue. Based on current studies, this site is not suitable for a reservoir and must be relocated or replaced elsewhere on the hilltop. The replacement site would be lower in elevation. There is still a need to build a hilltop reservoir.

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A #1 priority should be to acquire, negotiate or trade for a prime hilltop site that can be developed in the city's near future. Steps should be taken to secure a publicly accessible right of way for a greenbelt/trail system that can be phased with the hill's development. Additionally, it is recommended that any street improvements on Panorama Drive and 23rd Street include provisions for a trail, and bikeway system.

Size:	4 acre minimum for site in addition to linear area for a greenbelt and trails.
Park Type:	Passive view park with links to trail systems and greenbelt.
Facilities:	Picnic tables, benches, information, trail maps, parking.

Recommended Actions

- Secure a hilltop site for development.

- Secure R.O.W. for trail system and open space in accord with Parks and Recreation Master Plan.

- Because the City recognizes the benefit to be derived from comprehensive development of the "Hill", it is recommended that a Master Development Plan be proposed.

- Comprehensive development of the Hill should encourage privately funded construction of the parks and trails prescribed by the Master Plan. When parks and trails are developed privately as part of a Master Development Plan, credit equivalent to the public cost of such construction should be given to the developer.

- Recommended street improvements for Panorama Drive and 23rd Street should include consideration of a trail and bikeway system.

- The city of Signal Hill is currently exploring options for the consolidation of the antennas on the hill to one site. Alternatives that include parking or additional open space facilities should be considered if this action is taken.

- The City should consider the joint use of a site for a park and antenna farm as a secondary hilltop park.

8.3.4 Signal Hill Park

Signal Hill Park should be further developed and enlarged to provide the city with a viable community park. It should be a city goal to take advantage of opportunities to enlarge Signal Hill Park and to provide a greater variety of

facilities and an overall plan to improve the park's site design. Connections across Alamitos Avenue to the newly planned Cherry Avenue School should be studied in order to provide for safe and convenient passage between the two sites. Opportunities to maximize the shared benefits of the neighboring school and park should also be explored. Long term goals for Signal Hill Park would be the acquisition of adjacent sites in order to enlarge the park acreage to provide for additional recreational facilities.

Size:	10 to 15 acres
Park Type:	Community Park with active and passive recreation including the addition of specialized facilities.
Facilities:	Improvement of existing facilities ultimately increasing open space and specialized facilities. Facilities could include tennis courts, a gymnasium with indoor basketball and volleyball options, and a pool facility. Other options to consider include basketball and tennis courts.

Recommended Actions

Short Term

- Develop a specific and comprehensive plan for immediate and future site improvements including circulation.

- Reconsider a new location for full court basketball.

- Provide for safe passage between Signal Hill Park and Cherry Avenue Elementary School.

- Upgrade overall landscaping including turf.

- Upgrade play equipment.

Long Term

- Monitor available sites adjacent to Signal Hill Park for acquisition.

- With expansion, develop Signal Hill Park as a complete Community Park with the addition of specialized recreation facilities. Possibilities might include tennis courts, a pool facility and a multi-purpose gymnasium/auditorium.

8.3.5 Develop a Park Trails and City Walkway System

Policy 1.2 of the Environmental Resources Element of the Signal Hill General Plan states a priority for integrating the city's recreational components by developing a greenbelt system including both pedestrian and bike trail components.

The development of a park trails and city walkway system will help promote a city atmosphere where the needs of automobiles do not compromise the experience of people on the street. Signal Hill's undeveloped right of ways, streetscapes and hillside areas provide a unique opportunity for the planning and design of a park trails and city walkway system.

The park trails will consist of natural trails utilizing existing oilfields roads, trails in use by the Sierra Club, and other routes which would link park facilties to community facilities. Hillside areas not suitable for development would be preserved in a natural state. Trail rights of way up to 50 feet in width would protect existing flaura and provide habitats for fauna.

Elements of a parks trails system should include:

- Preservation of natural terrain, flaura and fauna
- Interpretive signage
- Slope preservation/protection
- Walking and hiking options

Size: 4.34 Acres

The city walkway system envisions use of signs, special sidewalk, street tree and landscape treatments to create an attractive pedestrian oriented greenbelt connecting the various elements of the city's park system.

Elements of a city walkway system should include:

- Street furniture (Drinking fountains, benches)
- Interpretive signage (Distance, point of interest)
- Colored or Textured walkways
- Wide sidewalks
- Special Tree & Landscape Provisions

Size: 3.34 Acres

Recommended Action

Develop design guidelines and a draft ordinance considering: R.O.W., setback, street tree, landscape, building height and vehicle circulation requirements for a pedestrian zone.

8.3.6 Develop a Hilltop Reservoir Park

At the current time, the city of Signal Hill is planning to build a hilltop reservoir. The City should capitalize on the opportunity to create an additional Hilltop Park on top of the proposed park reservoir.

Size: +/- 1 acre

Park Type: Active park

Facilities: Dependent on structural considerations.

Recommended Actions

- Include the provision of a park into all planning efforts for the proposed reservoir.

- Consult with local residents to refine appropriate facilities and amenities to be included.

8.3.7 Develop the Discovery Well Site

The Alamitos well site should be enhanced as a historic site. Given the site's historic significance to the City of Signal Hill and the State of California, attempts should be made for its development as a passive park.

Possibilities might include the donation of the site, city acquisition, and/or development of the site through the use of private funding sources. City acquisition should be a secondary priority.

Size: .50 to 1 acre

Park Type: View and monument park with exhibits

Facilities: Passive viewing historical exhibits.

Recommended Actions

- Retain the Discovery well site as a historic landmark.
- Negotiate for parcel with existing property owner.
- Explore acquisition and funding of site development through the private sector.
- Explore acquisition and funding through the public sector as a state park or landmark location.

8.3.8 Hathaway Avenue Parks and Greenbelt System

The Hathaway Avenue parks and greenbelt system will serve the needs of planned residential development and add an important component to the proposed citywide walkway and park trail system. Areas not appropriate for residential or park development should be set aside and enhanced as open space with appropriate landscaping.

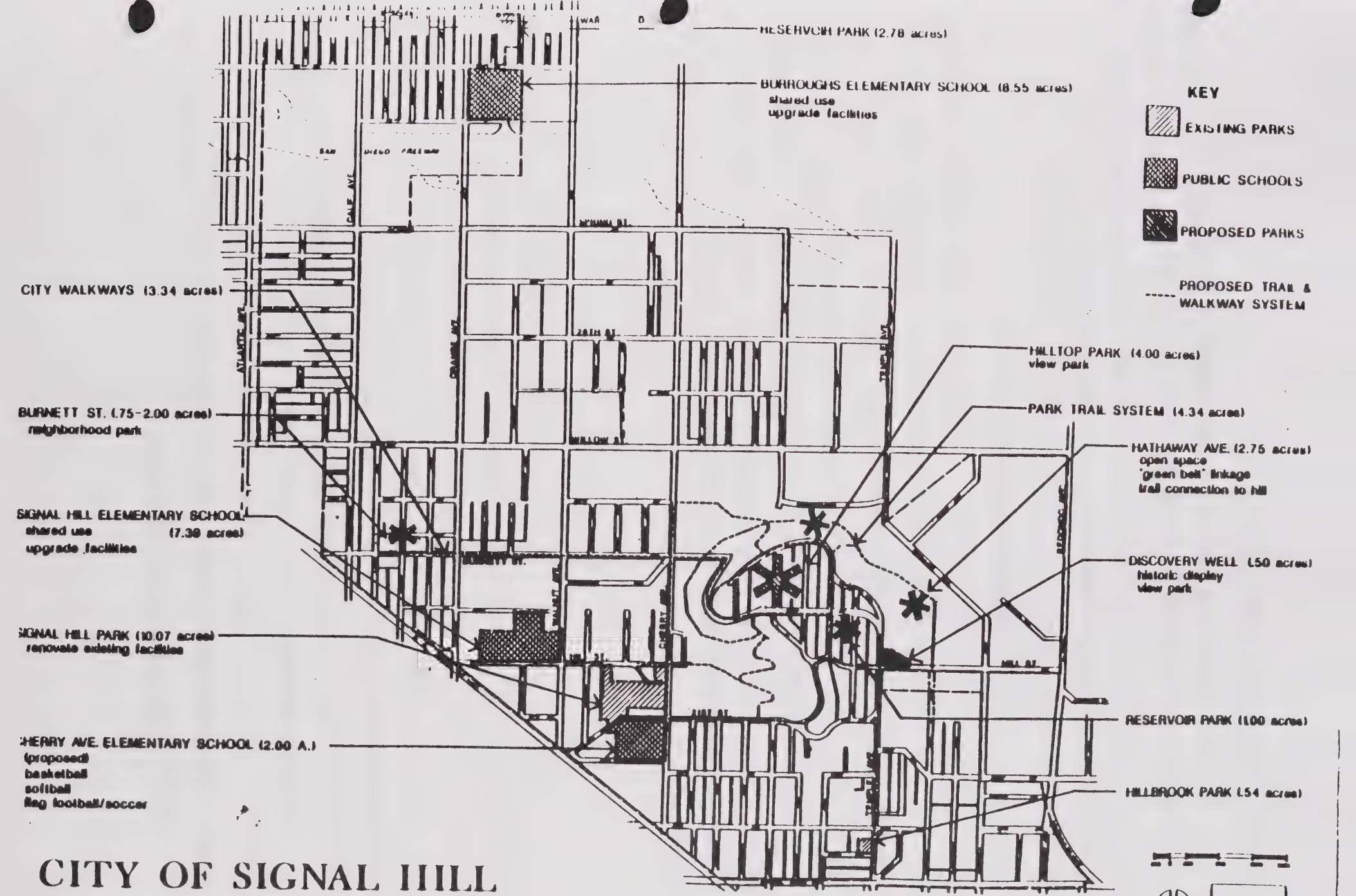
Size: 2.75 Acres

Park Type: Open space and greenbelt system with trails linking a series of small parks to the proposed Hilltop Park and City Walkway System.

Recommendations

- Prior to residential development on the hill, designate sites and locations for parks, trails and open space.

- Parks located along Hathaway Avenue should be located to jointly serve areas north of Combellack Street and south of Hill Street.



CITY OF SIGNAL HILL

PARKS & RECREATION MASTER PLAN

PROPOSED PARK & OPEN SPACE SYSTEM

Figure 8.1

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8.4 OPTIONAL PARK DEVELOPMENTS

Optional park developments are sites or general locations which have been identified and whose eventual or phased development will be the key in providing a full range of recreational opportunities for future residents.

1. Twenty First Street Park

The Twenty-first Street Park site would supplement recreational opportunities provided by future development on the hill. The 1.83 acre site is flat, providing a good size area for an open play field that can not be easily provided on the hill. Additionally, the site has excellent potential for a node within the trail system connecting to hilltop view sites and promenades.

Size:	1.83 Acres
Park Type:	A neighborhood park with an open playfield, trees and a trail connection to the hill.

Recommended Actions

- Consider site for secondary priority acquisition with future development.

- Provide right-of-way for a trail connection to the hill with any development of the site.

2. Hill Street Park

The Hill Street Park site would serve a future need for play fields in this area. The site is relatively flat. This area of Hill Street also offers opportunities to create a "Gateway" to the city which would be furthered by a sensitive landscape treatment of the site.

Size: 3 to 5 Acres

Park Type: Open play fields and landscaping

Recommendations

- Consider site for a secondary priority acquisition.
- Develop part of the site to create a "Gateway" to the city.

3. Gundry Avenue Park

Development of the Gundry Avenue site as a park would be limited in size and facilities due to topographic constraints. Property owners also plan to develop residential uses on site in the very near future. The site does offer view opportunities and, if developed for recreation, could serve the need for a park in close proximity to the existing residential area. Some of this need is being satisfied by a condominium complex which provides its residents with a pool and paddle tennis courts.

The need for a park in this area may be questioned based on limited access, poor visibility (i.e., lack of security) and the limited number of neighborhood residents that it might serve.

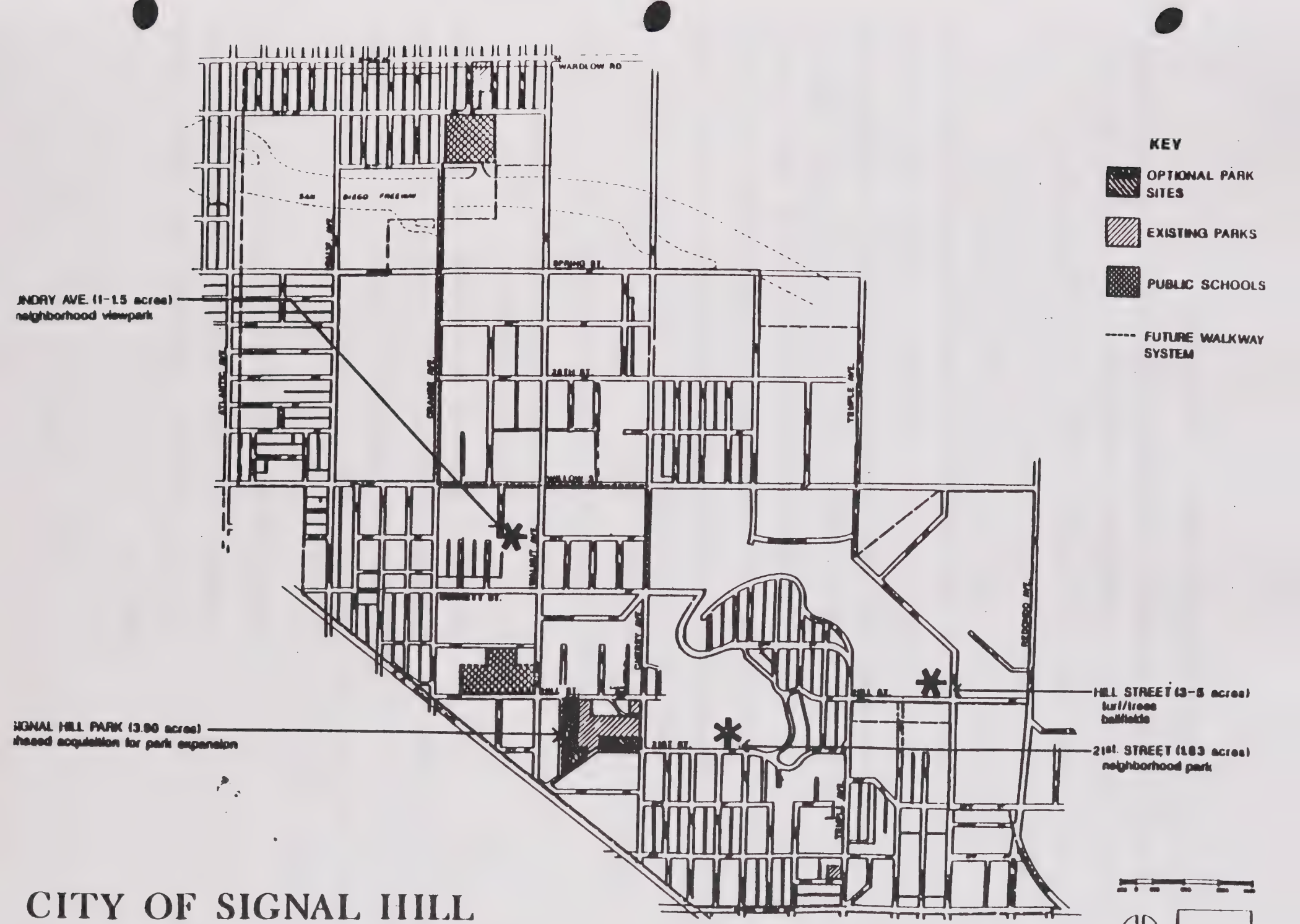
Acreage:	1-1.5 acres
Park Type:	Mini Park
Facilities:	Benches, picnic tables, drinking fountain

Recommendations

- Consider for secondary acquisition and development.

4. Signal Hill Park Acquisition

See Section 8.3.4 - Long Term Improvements.



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OPTIONAL PARK DEVELOPMENTS

Figure 8.2

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8.5 FUTURE WALKWAY SYSTEM

As an addition to the park trails and city walkway system, this will serve as an integrated linkage between the north and south portions of the city. See Section 8.3.5.

8.6 DEVELOP A SIGNAL HILL BIKEWAY SYSTEM (FIGURE 8.3)

Despite the popularity of bicycling among survey respondents in Signal Hill, there are currently no formal bike paths in the city. Fortunately the city is situated in close proximity to five existing Class I bike paths that are being integrated to form a regional system that will eventually cover from 60-70 miles. Primary links being considered by the city of Long Beach to help complete the system include options that could cross the city of Signal Hill or extend along its borders.

In support of the city's General Plan, two major goals for the development of a citywide bike system are recommended;

(1) Develop a series of bike paths that will provide linkages to the main components of the city's park system, most importantly Signal Hill Park and the hilltop sites.

(2) Coordinate with the City of Long Beach to complete linkages that would connect a Signal Hill system with the adjacent Long Beach and regional bike systems.

While the exact location of the bike routes are dependent upon a careful analysis of such factors as feasibility for acquisition, topography, view lines, traffic analysis, engineering, and R.O.W. widths, Figure 8.3 identifies the major routes that should be studied.

8.6.1 Proposed Study Routes

Major N-S Streets: California Avenue and Cherry Ave., North of Burnett, Temple, Hathaway, Obispo

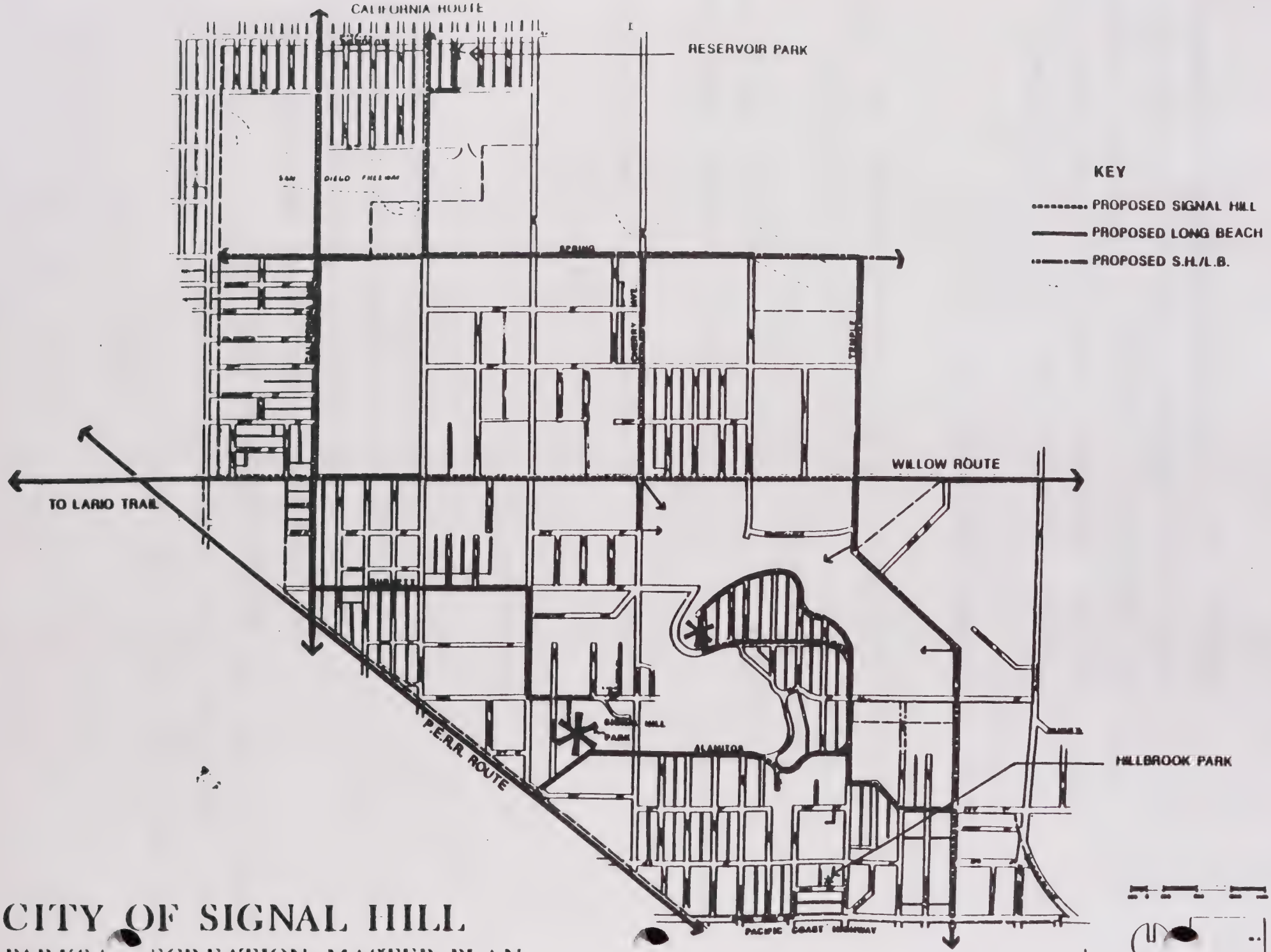
Major E-W Streets: Spring and Willow

Alamitos Ave.: Connection from Signal Hill Park to the proposed P.E.R.R. route and to the Hilltop Park.

21st and 20th: Connections from the Hilltop Park area to the proposed P.E.R.R. route

8.6.2 Recommended Action

1. The city should undertake a thorough engineering review of potential bikeway routes for technical appropriateness. The study should be also include preliminary cost estimates and identify potential funding sources and strategies.



CITY OF SIGNAL HILL

PARKS & RECREATION MASTER PLAN

Figure 8.3

8.7 PARK AND RECREATION FACILITY DEVELOPMENT AND MANAGEMENT ISSUES

In the course of examining the city of Signal Hills parks and recreational facilities, programs, and overall management, the master planning process identified areas pertinent to the development of the Master Plan. These observations are intended to guide improvements within existing parks and to help create programs for the development of new facilities. Situations will arise when the issues, needs and priorities of a given site will strongly influence what is appropriate.

8.7.1 Neighborhood and Community Park Uses:

As discussed earlier, each park type should serve distinct purposes. Mini parks of an acre or less can substitute for a backyard in areas of high density and should be limited to offering passive open space, play lots, and areas for picnicking and viewing. Active recreational facilities should be limited. Neighborhood parks provide for the day to day recreational needs of residents in close proximity to the park. Due to the

small size of these parks scheduled uses that draw large numbers of people, and the associated need for parking, are not appropriate. Conflicts with adjacent property owners can and often do arise when such parks are utilized by organized sports leagues.

It is therefore recommended that the development of neighborhood parks should provide for informal/pickup play and not be programmed for competitive practice or play. Conversely, the development of community parks often cater only to utilitarian needs of organized sports at the exclusion of nearby residents and users. These parks often lack the proper amenities of passive open space and children's play areas. The master planning of a community park in a city the size of Signal Hill must recognize and incorporate the previously noted neighborhood related recreation uses.

8.7.2 Centralized Community Facility

As identified in the needs assessment, the City of Signal Hill is deficient in its provision of sports facilities to support the current population. The only park currently providing sports facilities is Signal Hill Park. Given the City's size, and the focus of Signal Hill Park as a community park, it is recommended that it serve as a centralized facility providing a variety of specialized and active, recreational opportunities for

the whole community. A concentration of facilities at Signal Hill Park should not preclude its combined role as a neighborhood park with passive open space and other features to serve residents in close proximity.

8.7.3 Lack of Adequate Indoor Facilities

The current inventory of indoor facilities reveals a lack of a proper enclosed gymnasium. The existing community center building is undersized for most indoor recreational activities including Volleyball and basketball. There is a high demand for recreation programs which require indoor facilities and it is likely that this deficiency in the park system will increase as the community grows.

8.7.4 JOINT USE AGREEMENT WITH LONG BEACH UNIFIED SCHOOL DISTRICT

School facilities are a great resource to the community of Signal Hill. The Long Beach Unified School District and the City of Signal Hill currently, and in the past, have undertaken informal agreements for the use of school recreation facilities. The spirit, and actualization, of this cooperation should be encouraged and utilized.

School recreation facilities are important to the city and can help satisfy an acute need for large open play

fields while supplementing the provision of active recreation opportunities. Both Signal Hill Elementary and Burroughs Elementary Schools, if opened up for shared use, would also satisfy a deficiency of recreation facilities in these areas.

The improvement of these recreational facilities would also offer benefits to the Long Beach Unified School District. The addition of turf and trees, and the renovation of existing play facilities at school grounds would be an asset to all of those attending the school.

Afternoon programming provided by the Signal Hill Community Services Department would be a convenient service to parents of children attending these schools and a benefit to the community at large. For these reasons it is recommended that Signal Hill pursue an agreement with Long Beach Unified School District to coordinate the future use of school playgrounds for public recreational use.

8.7.5 Cost of Improvements and Acquisition

A summary of the costs for implementing the master plan are presented in Table 8.1 and 8.2. The summaries include the estimated cost of acquiring and developing new park facilities, improving or renovating existing properties, and estimated maintenance cost.

Table 8.1 describes the improvements outlined in Figure 8.1 and represents the most fiscally conservative and feasible approach. Table 8.2 and Figure 8.2 describe improvements and sites for which funding is not yet readily available, but represent future goals for the city to pursue.

Chapter Nine will discuss the Financing Options available for implementing the Master Plan recommendations.

TABLE 8.1

SIGNAL HILL PARKS & RECREATION MASTER PLAN
PRELIMINARY COST ESTIMATE
PROPOSED PARK SYSTEM

POD Inc
7/26/89

Park	Acres	Cost to Acquire	Cost to Retrofit	Cost of Improvements	Total Capital Costs	Current Yearly Maintenance	Estimated Yearly Maintenance	Total Yearly Costs
Existing Parks								
Signal Hill	10.07	$0	$1,007,000	$0	$1,007,000	$130,000	$299,884	
Reservoir	2.78	$0	$0	$0	$0	$52,000		
Hillbrook	0.54	$0	$0	$0	$0	$50,500		
New Park Facilities (1)								
Burnett Ave.	0.74	$483,516		$126,000	$609,516		$16,117	
Discovery Hall	0.60	$484,000		$72,000	$556,000		$10,890	
Hathaway Ave.	2.75	$2,395,800		$453,750	$2,849,550		$59,895	
Hilltop Park	4.00	$3,484,800		$1,550,736	$5,035,536		$87,120	
Park Trails	4.34	$2,268,604		$540,420 (5)	$2,809,024		$94,525	
City Walkway (4)	3.34	$0		$290,980 (2)	$290,980		$72,745	
Hilltop Reservoir	1.00	$0 (6)		$0 (6)	$0 (6)		$21,780	
School Facilities								
Burroughs (3)	8.55		$270,000	$0	$270,000			
Signal Hill Elem (3)	7.38		$50,000	$0	$50,000			
Cherry Ave.*	2.00		$50,000	$0	$50,000			
Totals	48.00	$8,116,720	$1,377,000	$3,033,886	$13,527,606	$232,500	$682,957 (4)	

* Proposed

1. Acquisition costs based on City appraisal.
2. Assumes buildout on city R.O.W. @ $2.00 square feet.
3. Assumes renovation of +/- 80,000 sq. ft. @ $3.00 square foot cost.
4. Assumes $.50 square feet yearly maintenance cost.
5. Assumes $3.00 square foot improvement cost.
6. Acquisition and improvements included in funding of the Reservoir.

TABLE 8.2

SIGNAL HILL PARKS & RECREATION MASTER PLAN
COST ESTIMATE
OPTIONAL PARK DEVELOPMENTS

POD Inc
7/26/89

Park	Acres	Cost to Acquire	Cost to Retrofit	Cost of Improvements	Total Capital Costs	Current Yearly Maintenance	Estimated Yearly Maintenance	Total Yearly Costs
Signal Hill (1) Park	3.80	$5,720,000		$2,476,400	$8,196,400		$169,884	
New Park Facilities								
Hill Street (1)	3.16	$3,028,391		$563,120	$3,591,511		$68,025	
21st Street	1.83	$1,594,296		$332,900	$1,927,196		$39,857	
Gundry Ave.	1.15	$1,140,400		$230,000	$1,370,400		$25,918	
Walkways	1.20	$0		$105,600	$105,600		$26,400	
Totals	11.24	$11,483,087	$0	$3,708,020	$15,191,107	$0	$330,884 (2)	$0

1. Acquisition costs based on City appraisal.
2. Assumes $.50 square feet yearly maintenance cost.

CHAPTER NINE
FINANCING IMPROVEMENTS

The proceeding chapters reviewed existing parks and recreation facilities within the city, discussed current recreation patterns, and made recommendations for a comprehensive Parks and Recreation Master Plan. In addition, the anticipated costs for implementing the proposed improvements have been outlined.

Chapter 9 will discuss the options for funding the recommended program's $13.5 million dollar budget over the next twenty years. The financial plan outlined is intended to serve as a blueprint for the city in determining how to fund desired improvements. It should be recognized that this is a flexible plan, intended to change as conditions, requirements and programs change and evolve.

This chapter begins with an overview of current spending for parks and recreation within Signal Hill, including a review of the current park dedication/fee ordinance. The chapter concludes with a review of available funding sources followed by recommendations for funding the proposed park improvements.

9.1 CURRENT PARKS AND RECREATION EXPENDITURES

For the fiscal 1988-89 year, the City of Signal Hill had $869,110 budgeted for the operation and maintenance of existing park and recreation facilities and programs. Of this money, approximately $505,360 (58%) is for maintenance, with $363,750 budgeted for programming efforts. At this time, no funding is allocated within the City budget for the acquisition or development of new park facilities. The only ongoing source of funds for park development and acquisition is provided by the City's park dedication/fee ordinance. A more complete description of current funding sources follows.

9.1.2 Current Funding Sources

DEPARTMENT: PUBLIC WORKS

DIVISION: PARK MAINTENANCE

SOURCE OF FUNDING - GENERAL FUND

Activity Description

The Park Maintenance Division is responsible for the complete landscape and irrigation maintenance of city right-of-ways, parks, city buildings, green-belts, landscaped slopes, parkways, and median islands. This also includes clean-up and disposal of debris and litter and the maintenance of picnic facilities and playground equipment.[5]

- Yearly Park Maintenance Division Funding

  1987-88 Budgeted $505,360

  1988-89 Budgeted $487,900

  1988-89 Estimated for Parks Only..... $250,000

DEPARTMENT: COMMUNITY SERVICES

SOURCE OF FUNDING - GENERAL FUND, COMMUNITY DEVELOPMENT BLOCK GRANTS, PROPOSITION "A"

Activity Description

Community Services provides recreation and social services for citizens of all ages and for businesses in Signal Hill. Current programs offered include:

1. Senior Citizens - Dial-A-Lift, Brown Bag Food Program, Informational Referral Services, weekly exercise and craft classes, blood pressure clinics, potluck luncheons, special events, day and overnight excursions.
2. Adult and Business - Variety of special events, excursions, classes and sports programs.
3. Youth - Weekly teen night and dances, excursions, summer sports programming, after-school and holiday supervised recreational activities such as cooking, drama, movies and a variety of outdoor games.

Community Services Funding

1987-88 Budget	$234,350
1988-89 " "	$289,250
A. Proposition "A"	$ 74,000
B. CDB Grant	$ 8,600
C. Program Income	NA
Total budget 1988/89	$371,850

Note: Budget figures include funding for salaries, supplies, programming, promotion, and animal control.

9.2 RECENT PARK DEVELOPMENT PROGRAMS

To help understand the process for funding park improvements, the following will briefly describe how two recent projects within Signal Hill, the Reservoir Park renovation and the development of Hillbrook Park, were financed.

9.2.1 Recent Park Development

A. Reservoir Park

Improvements to Reservoir Park were completed March 15, 1988, funding for improvements totalled $149,000. 75% of the improvement costs were provided through a state park grant (Roberti - Z'berg Harris Urban Open Space and Recreation Grant Program) with the remaining 25% coming from the General Fund. Estimated annual maintenance for the park as of June 1988 was $52,000.

- o Reservoir Park Improvements: $149,000 Total
- o Yearly Maintenance Cost: $52,000

Hillbrook Park

B. Hillbrook Park was purchased by the City on October 21, 1980 for $225,400. Total funding for the park's acquisition, design and development was $705,600. Financing for the park's development was through the city's general fund. Annual maintenance for the park is estimated at $50,500.

- o Hillbrook Park Design & Development: $705,600
- o Yearly Maintenance Cost: $ 50,500

Signal Hill Park

Signal Hill Park is Signal Hill's largest park with almost 11 acres. Few major improvement programs have been undertaken in recent years.

- o Yearly Maintenance Cost: $130,000

9.3 THE QUIMBY ACT

One of the largest potential contributors to the development of parks and recreation facilities outside of the General Fund tax role is the Quimby Act. The

Quimby Act was established by the California Legislature in 1965 in response to the state's increased rate of urbanization and the need to preserve open space and parks. In 1982, the City Council adopted an ordinance establishing Section 18.32.120 Park and Recreation Dedication and Fees. The Park dedication/fee ordinance applies to requests for residential subdivisions through either a parcel map or tract map. The fee, dedication or combination of both is made a condition of tentative map approval payable upon issuance of certificates of occupancy for new residential development.

These regulations apply to residential developments where tract subdivision is necessary. Apartments and isolated residential developments are not subject to the fee. Condominium and large scale single family tract developments are most impacted by the ordinance.

9.3.1 Current Financing Program

The City's current park dedication fee ordinance established under the Quimby Act, requires that a base goal of four acres per 1,000 people be used in establishing the amount of land per dwelling to be dedicated. The intent of the ordinance is for each project to dedicate or pay a fee for its proportionate share of achieving four acres per 1,000 people. A

standard of 3.2 persons per single family dwelling unit and 2.2 persons per multiple family dwelling unit is used in calculating the impacts of typical projects for Signal Hill. On file with the City of Signal Hill Planning Department is the complete analysis utilized in the establishment of the city's existing Quimby Act ordinance.

9.3.2 Calculation of Dedication or Fees

The current Signal Hill subdivision ordinance requires the following method to calculate dedications:

a. 560 sq. ft. of land per single family dwelling
b. 385 sq. ft. of land per multiple family dwelling

The subdivision ordinance requires the following method to calculate fees in lieu of dedication:

The fair market value of:

a. 560 sq. ft. of land per single family dwelling
b. 385 sq. ft. of land per multiple family dwelling

Assuming $20/sq. ft. land value:

a. $20 X 560 sq. ft. = $11,200 per single family dwelling

b. $20 X 385 sq. ft. = $ 7,700 per multiple family dwelling

It should be noted that the major variable within this equation is the cost per square foot. For the purpose of this example, we have used $20 per square foot. It is the intent of the ordinance that the cost per square foot is determined at "Fair Market Value" for the land to be acquired at the time of development.[6]

9.3.3 Comparing Signal Hill to Other Cities

A comparison of Signal Hill's Quimby formula with that of other cities revealed that each city's fee should be judged upon its own merits and unique factors. An analysis of a survey undertaken by the City of Burbank in 1986 reveals that, at face value the Signal Hill Quimby Act could be construed as more costly than most cities. However, a simple comparison of fees is misleading. For example, many cities which have a lower Quimby fee extract additional development fees that Signal Hill does not.

Among the key issues that arose during interviews with other cities:

A. The formula must be simple and easy to compute. Many cities have, over the years, backed into a flat fee because of the difficulty computing complicated formulas. A common remark was that a simple system which collected less money was better than a complicated system which might yield higher total fees.

B. Clarity in the regulations and a resolve to stand by them is paramount. Most parties interviewed in both the public and private sectors prefer adherence to established sectors, regulations rather than constant debate over "special considerations" for each project.

C. Cities can and do organize their fees to address housing goals and the vagaries of the market place. For example, in Los Angeles, which applies a fee to all housing types, fees for moderately priced (and moderate density) apartments are much lower than those for high priced (and higher density) condominium units.

D. **Adjust fees periodically.** As land prices increase, the cost of acquiring and building parks in the future will in all likelihood cost more than today. With this in mind, the formula for setting fees needs to be adjusted to reflect current land prices, using for example, the consumer price index.

9.4 AVAILABLE PARK FINANCING PROGRAMS AND RECOMMENDATIONS

The following briefly describes a wide spectrum of funding sources for parkland acquisition and development within the City of Signal Hill. It is reasonable to conclude that no one source will be able to provide all of the monies required. However, creative use of the various alternatives available should create enough funding to allow for development of the park facilities projected in the Master Plan.

9.4.1 General Fund

Summary

The General Fund, financed by the city's property and sales tax remains the traditional funding source for park development, maintenance and programming. The city currently earmarks $786,510 of its $9,134,360 budget (8.6%), directly and indirectly for existing Parks and Recreation programs. At the current time, there is no provision for a capital improvement replacement fund

which would set aside monies to replace park improvements as they wear out.

Recommendations

1. Establish a Capital Improvement Replacement Fund. Based on the estimated life of existing and future parks, a reserve fund for the replacement of facilities (buildings, landscape, lighting) should be established to provide for the orderly replacement of deteriorated and obsolete park features. As described in Table 9.1, the fund is to be based on a yearly evaluation of the current value of existing park improvements divided by their estimated life.

2. Maintenance and Programming. The Master Plan acknowledges that the yearly cost of maintaining the city's park system will increase due to inflationary costs and the addition of new facilities and programs. As new facilities are added, commensurate increases in the allocation for maintenance and programming will be required. An estimate of these increases is offered in Table 9.1, 9.2. In addition, in all likelihood, there will be an increase in the amount of police costs associated with an increased park system.

TABLE 9.1

SUMMARY - CAPITAL IMPROVEMENT COSTS AND REPLACEMENT

FACILITY	ESTIMATED VALUE
A. FIXED IMPROVEMENTS	
Signal Hill Park	$1,075,250
Hillbrook	172,500
Reservoir	143,750
SUBTOTAL	$1,391,500
Estimate Yearly Replacement Allocation	$ 27,830
(50 Year Life = 2% Year)	
B. LANDSCAPE/SITE IMPROVEMENTS	
Signal Hill Park	$1,412,315
Hillbrook Park	250,125
Reservoir Park	435,850
SUBTOTAL	$2,098,290
Estimate Yearly Replacement Allocation	$ 83,932
(25 Year Life = 4% Year)	
TOTAL YEARLY REPLACEMENT ALLOCATION (1989) (A + B)	$ 111,762

(NOTE: Fixed improvement: Buildings, structures, are assumed to have with a 50 year life expectancy; while landscape/site improvements, landscaping, fountains, lights, etc., are computed with a 25 year life expectancy.)

9.4.2 Funds Generated by Development Activities

Primary sources of capital investment funds for park site acquisition and development based on private sector development within the community may include:

A. QUIMBY ACT

Summary

The Quimby Act is described in Section 9.3. Adopted and in place since 1982, the ordinance has been utilized twice, collecting a total of $44,772 as of 6/30/88.

Recommendation

Maintain existing ordinance as adopted with the following exception. Reduce single family requirements to 385 sf/unit for all dwelling units. At an assumed cost per square foot of $20, this would effectively lower a developer contribution from $11,720 to $7,700 per unit.

B. AB 1600

Summary

AB 1600 (Government Code 6600), which became effective January 1, 1989, is an act relating to development fees. The intent of the legislation is to balance development

interests against local government's concerns regarding the cost of capital facilities necessitated by new development. The legislation allows fees to be imposed at the time of a development project's approval once a relationship between the need for the facility and the project being developed is established.

All new development fees imposed by local government must:

1) identify the purpose of the fee and its use;
2) substantiate a reasonable relationship between the fee and the development on which the fee is imposed;
3) deposit, invest and account for such fees;
4) refund uncommitted funds on a prorated basis after five years.

Typical facilities funded through AB 1600 are likely to include streets, sewers and water mains as well as the acquisition and development of parks and recreational facilities, bike lanes and trail systems.

Two key provisions of the statute are, first, the need to establish an "essential nexus" or reasonable causal connection between the land use action and the application of the fees. Secondly, the fee must be commensurate with the impact.

Recommendations

Under enabling AB-1600 legislation, adopt the following development impact fees:

1) Commercial Developments

Based on the premise that new businesses benefit from being located in the vicinity of parks and recreational facilities and that new business employees will utilize available facilities, move into town, and impact the quality of life within the city, it is recommended that fee of $.35 per square foot of new development be adopted.

2) Residential

For all units developed within the city not covered under the existing Quimby Act, including single family, multi-family, condominiums, apartments, (with hardship exceptions, as recommended by staff and approved by the City

Council), it is recommended that a blanket fee based upon a 385 sf/unit allocation be established. Fees collected would be based upon fair market value at the time of development. At an assumed value of $20, the cost per unit would be $7,700.

9.5 POTENTIAL FUNDING SOURCES

A. Conveyance Tax

<u>Summary</u>

The Conveyance Tax is a proportional tax based on a percentage of real property value conveyed or transferred. Established under the premise that an equal "fair share" is a primary goal in funding improvement programs, a conveyance tax is based on percentage of real property value being transferred. Both residential and commercial properties are included. The City of San Jose has used a percentage of this tax to fund its citywide park system since 1973. Voter approval is not required.

<u>Recommendations</u>

A conveyance tax is not recommended at this time, however, it should be considered in the future if funding requirements or programs shift significantly.

B. Excise Tax

Summary

The State of California gives local governments the power to impose excise taxes on the basis of new construction. The advantages of an excise tax over the use of exactions and impact fees is that the tax is currently not subject to a "reasonable relationship" or "needs nexus". The monies collected do not have to be earmarked and need not relate specifically as a need or benefit accruing to a particular development. The purpose of the tax is to raise revenues and it cannot be used to regulate land or development.[7] However, the possibility exists of the city being required to obtain voter approval.

Recommendation

An excise tax is not recommended at this time, as new development is to be addressed under the proposed AB-1600 regulations.

C. Benefit Assessment Districts

Summary

Benefit assessment districts are a well tested means of financing public improvements through a tax on individual parcels of property which benefit from the improvements. Assessments can be initiated by a

petition of property owners or by a direct action of the City Council.

The costs and expense of projects should be apportioned to benefited properties within the district. Projects are usually financed by the issuance of bonds which are repaid over time by the assessments. Improvements for landscaping and parks are commonly authorized for construction under provisions for special assessment districts.

Two critical criteria in assessing fees are: (1) that the benefit must be clearly identified, and (2) that it be considered specific and direct. These points emphasize that only special benefits, not more general benefits for the community as a whole, be applied.

The advantage of a benefit assessment district is that monies for parks are received up front, in a steady and predictable cash flow, and that the park's development would proceed immediately.

Disadvantages include the 2/3 vote approval of affected properties is required. Recent experience in California indicates few votes are successful.

The Mello-Roos and Landscape Lighting Act are both variations of a Benefit Assessment District.

Recommendations

See Mello-Roos and Landscape and Lighting Act below.

D. Mello-Roos Act of 1982

Summary

Indirectly, Mello-Roos Districts represent a source of capital funds for park development that are related to private sector real estate development in the community. As new development occurs within a designated district, a levy or tax can be applied to fund increased service requirements resulting from that development.

The tax or levy is typically a flat fee or a formula based on land use or footage. Formulation of a district requires an action by the City Council or a petition signed by a minimum of 10 percent of the registered voters or land owners in the area. A two thirds vote within the district is required to levy a special tax or to incur bonded debt. For these reasons, Mello-Roos Districts are typically established where land is undeveloped, and property owners are interested in development.

The district must establish an appropriations limit (Proposition 4 - the Gann limit) submitted to and approved by the voters. The tax can be based on benefit received by the parcel or the cost of providing facilities or services to each parcel. The tax cannot be based on estimated property value. Annual hearings to determine the assessments are needed.

Advantages of Mello-Roos versus Special Assessments are as follows:

- Can provide financing for general benefits
- Can be used for any type of capital facility
- Authorizes ongoing operation costs
- Lowers borrowing costs/interest rates based on tax
- Tax is deductible from federal income tax for property owners

The major disadvantage when compared to special assessments is the requirement of two thirds voter approval, which is often difficult to achieve. A recent survey of 17 cities indicated a 35% rate of voter approval (Long Beach Study). In cities with Mello-Roos assessments, several have been asked by homeowners to take over the payment of Mello-Roos debt.

Recommendations

Not recommended at this time, reconsider at a later date should funding conditions change.

E. Landscaping and Lighting Act of 1972

Summary

The Act allows for formation of an assessment district which can provide funding for park and recreation improvements including equipment purchases, maintenance and administration of the District. Assessments are collected with the property tax and must be fairly distributed in proportion to the benefit received. Districts are initiated by council resolution. Advantages are that voter approval is not required, zones do not have to be contiguous, and that the legal authority of the Act has been tested in court. The disadvantage is that public hearings are required to set the annual levy.

Two cities in the Los Angeles area which currently operate assessment districts using the Landscape and Lighting Act are Rancho Cucamonga and San Dimas. Both cities have districts that are citywide.

Rancho Cucamonga's Parks and Recreation Assessment District provides funding for the installation and

construction of park and recreation improvements, and for park maintenance fees covering residential, commercial and industrial development. Current fees for the district are $33.00 per year for single family residential parcels with fees for industrial and commercial based on a fee per acre basis.[7]

The San Dimas district primarily funds street lighting with a small percentage for median strips. Fees per residential unit are $35.00 with commercial and industrial fee based on a charge per frontage foot.[8]

Recommendations

Not recommended at this time, reconsider at a later date should funding conditions change.

F. Redevelopment Tax Increment

Summary

Redevelopment Agency tax increment revenues are in some cases used to finance development of park and recreation facilities. These revenues are derived from development, which creates tax increment, which can be pledged to support bond financing for acquisition and development of park sites or other types of recreation facilities such as theaters or swimming pools. Within Signal Hill, approximately 61% of the city is currently included within the redevelopment jurisdiction.

The city has used tax increment for public works improvements and economic development. The city is also required to begin using 20% of its increment for low and moderate housing. At this time no funds are allocated directly to Parks and Recreation improvements and programs.

Recommendations

1. The city should consider the use of tax increment funding to finance park improvements as needed to effectively balance the cost of all park improvements.

2. Bonding. No specific recommendations for using Redevelopment Agency bonding capabilities at this time. However, the City should be alert to bonding opportunities coupled with other bond programs, which would result in reducing underwriting costs.

G. General Obligation Bonds

Summary

General Obligation Bonds are tax exempt securities secured by the "full faith and credit" of the city.

Requirements pertaining to General Obligation Bonds are two-thirds voter approval and that the total amount of bonds cannot exceed a specified percentage of the assessed value of the real and personal property in the city's domain. The advantages are that the bonds cost the taxpayer less due to lower interest rates, legal fees, and underwriting costs. The primary disadvantage to issuing General Obligation Bonds is potential difficulty in obtaining voter approval.

Recommendations

Not recommended this time, consider as appropriate in the future.

H. Lease Back

Summary

Longer term, non-traditional uses of excess land associated with park development can generate revenue to service the debt or at least part of the debt to acquire not only the site used for non-traditional land lease but also portions of the site used for park and recreation activities. Precedents for these types of land uses include:

- o Some residential uses
- o Highway-oriented retail uses
- o Lease of key sites within a park environment for a restaurant operation
- o Hotel and motel land leases
- o Long-term use for office or industrial purposes

In these situations the rent from the land lease exceeds the debt service required from the land lease itself making a contribution to debt service on the cost of acquiring those portions of the site used for recreation purposes.

Recommendations

The city should look for lease back opportunities. The Hilltop site offers the potential for the development of hotel or restaurant facilities which might offer a lease back opportunity.

I. Joint Development

In some cases, municipal parks are developed in conjunction with school districts' capital improvement programs through the shared use of recreation facilities.

Recommendations:

Chapter 8 outlined a program for the renovation and shared use of existing and proposed school property. No new school development (beyond the Cherry Avenue school) is anticipated at this time. A good working relationship with the LBUSD will insure that should a new school be considered in the future, a shared facility arrangement could be pursued.

9.6 REVENUES FROM OTHER AGENCIES

9.6.1 Grant Programs

Many park development improvement projects reviewed have been financed by grants from State Park Bond funds. Recently with the implementation of the California Wildlife Coastal and Park Land Conservation Bond Act of 1988, a number of programs have funds available. A summary of current programs of special interest are listed below.

A. Per Capita Grant Program: $120 million to cities, counties, park and recreation districts, regional park districts, open space districts, and other qualifying districts to acquire, develop, rehabilitate or restore park and recreation lands or facilities. Funds may be appropriated over a three-year period beginning July, 1989. Signal

Hills allocation based upon population is approximately $24,000.

B. Roberti-Z'Berg-Harris Urban Open Space Grant Program: $20 million to cities, counties and qualifying special districts on a 70% State and 30% local matching basis. This program provides funds for acquisition, development, special maintenance and innovative programs based on competitive needs and block grant allocation. Applications are due October 1989, with Signal Hills block grant allocation of ($4,037) due in June 1990.

C. Trails Grant Program: $5 million for competitive grants to public agencies and non-profit organizations to acquire and develop trails.

D. Historical Preservation Grant Program: $11 million for competitive grants to public agencies and non-profit organizations to acquire, develop, rehabilitate or restore historical or archeological resources.

E. Urban Forestry Program: $5 million in competitive grants to public agencies and non-profit organizations for urban tree-planting programs.

F. Community Development Block Grants: In recent years the City has obtained an average of $65,000 annually from CDBG funds. Designated to assist low and moderate income areas and families, Signal Hill's CDBG money currently supports the brown bag and housing rehabilitation programs. Funds have been earmarked for improvements to the Community Center and could be designated for parks and recreation programs.

G. Bicycle and Pedestrian Facilities (SB821): SB821 provides that 2% of Transportation Development Act sales tax funds be used for pedestrian and bicycle facilities including showers and lockers. 60% of the funds available yearly go to local governments upon application with the amount based on population. 40% of the funds are available yearly on a competitive basis. Requirements and considerations in the competitive process are as follows:

1) The Facility must have a regional component.
2) Funding is primarily for Class I and II bike paths.
3) Use of matching funds is looked on favorably.
4) Clear demonstration of demand or intended use.

5) Readiness and ability to implement.

6) Cost effectiveness of plan.

The administrative agency is the California State Department of Transportation. Application is through the Los Angeles County Transportation Commission. Yearly funding deadlines are in late August.

Recommendations

Because grant availability varies, it is difficult to rely on their funding. However, a few steps can help the city position itself to maximize grant opportunities.

1) Adopt a position of aggressively pursuing all grants, under the broadest range of opportunities. Understand that applying for grants is a time consuming process and may require additional manpower.

2) Assign one city staff member to coordinate all grants related to Parks and Recreation. Assign one staff member for each of the city agencies to forward potential funding opportunities to the lead person who will coordinate applications.

3) Consider retaining a part-time consultant who specializes in obtaining and securing grants. These professionals usually work on a percentage of grants fee received and may identify and collect from unrecognized and nontraditional sources.

4) Aggressively pursue multi-jurisdictional grants, with the LBUSD, the City of Long Beach, County Parks and Recreation, and others.

9.7 ONGOING REVENUE SOURCES

Despite budget stringencies implied by Proposition 13 and the Gann limitations, many cities finance acquisition and development of park sites and programming from General Fund revenues above and beyond the revenue required to provide ongoing city services.

A. User Fees

Summary

Park and recreation fees generate revenues from recreation activities (user fees, etc.) which permits diversion of some General Fund revenues that would otherwise be allocated to park and recreation operations to support capital improvements. The potential for enhancing revenue flows from park and recreation activities related to more aggressive fees

and concessionaire policies are described in the following recommendations.

Recommendations

Ongoing and new facilities must aggressively pursue a pay-as-you-go philosophy to a reasonable extent. No longer can the general population support facilities used exclusively by one group. The following is a outline of general parameters:

1) Review all existing permit systems.
2) Verify that fees charged are in line with the cost of providing the special service.
3) Weigh the benefits of subsidizing versus assessing the end users.
4) Consider a pay as you play metering system for lighted facilities.

B. Acquisition through Donation

Acquisition through donation has been a significant source of park and recreation land for a number of cities in the Los Angeles area. The City of Long Beach has received over a hundred acres of park land through donations. While this source is declining as development increases and open space dwindles, possibilities do exist particularly when the land in question has severe development constraints.

C. Adopt-A-Park

One County park department has encouraged service clubs to "adopt a park" and provide revenues for the park's operation and maintenance as well as contributing funds for capital improvements. The Signal Hill Rotary funded the construction of the bandstand in Signal Hill Park.

D. Corporate Donations

Historically, corporations have donated portions of sites being developed for other uses for development and operation of a park or have financed facilities within parks such as little league fields as gestures of good will. Even such recreation facilities as major league stadiums have been financed in part by donations generally in return for identifying the donor's name with the facility.[3]

Recommendations

The city should aggressively pursue opportunities to obtain alternative funding. Specifically, one staff member should be delegated to cover donations and administer these programs. A public awareness program in conjunction with the development of guidelines for those administering and eligibility should be developed.

9.8 Public-Private Cooperation

In some cases, public-private partnerships had been effective in providing recreation facilities.

A. Concession Revenue

The most effective concessions are sources that generate revenue to support bond issues for acquisition and development of other "recreation" activity. Some types of traditional recreation activities can produce revenues in excess of operating costs and contribute, at least partially to debt service for acquisition and development of a recreation facility. Recreation activities which are likely to generate revenues in excess of operating costs and, therefore, contribute to debt service include: baseball or softball diamonds, handball courts, tennis courts, bicycle rental, batting cages, equestrian facilities, polo grounds, swap meet grounds and food and beverage concessions.[4]

B. Facilities and Park User Fees

Physical amenities associated with public parks can provide sites for non-traditional recreation activities which imply revenue potential from

usage fees. Among the more financially effective of these are swap meets (which can produce revenues up to $1.5 million a year for some types of public recreation/public assembly facilities such as the Rose Bowl and Long Beach Flea Market, etc.). Providing facilities (i.e. community centers, conference facilities) for meetings of special interest groups such as schools or churches is a potential revenue source. Fees for weddings, concerts, consumer shows, bazaars, auto shows, antique shows, etc., are another revenue source for parks as are group picnics, Christmas tree sales and provision of carnival sites. The operating revenue potential derived from an aggressive park management operation can provide income to augment other capital funds for the development of needed facilities.[4]

C. Easements/Tax Incentives

Acquisition of open space easements by donation or purchase can give the city opportunities for the use of quasi-public or private land. These easements are specifically suited for the development of trail systems and bikeways where the use of private property can be facilitated through the provision of incentives to the land owner or developer. Tax incentives are one means

9.8 Public-Private Cooperation

In some cases, public-private partnerships had been effective in providing recreation facilities.

A. Concession Revenue

The most effective concessions are sources that generate revenue to support bond issues for acquisition and development of other "recreation" activity. Some types of traditional recreation activities can produce revenues in excess of operating costs and contribute, at least partially to debt service for acquisition and development of a recreation facility. Recreation activities which are likely to generate revenues in excess of operating costs and, therefore, contribute to debt service include: baseball or softball diamonds, handball courts, tennis courts, bicycle rental, batting cages, equestrian facilities, polo grounds, swap meet grounds and food and beverage concessions.[4]

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C. Easements/Tax Incentives

Acquisition of open space easements by donation or purchase can give the city opportunities for the use of quasi-public or private land. These easements are specifically suited for the development of trail systems and bikeways where the use of private property can be facilitated through the provision of incentives to the land owner or developer. Tax incentives are one means

by which private open space can be used to the benefit of the public. By preferential assessment or tax deferral land can be retained or used for parks or open space.[4]

D. Turnkey Facilities

In other cases, because of the public sector's ability to employ tax exempt financing, turnkey facilities have been developed by the public sector and provided to the private sector to operate on a long-term lease basis in which the lease revenues are more than adequate to recover the development cost of the facility eventually providing the public sector with a fully amortized public recreation facility.[4]

Recommendations:

The city should aggressively pursue opportunities for public-private cooperation. Specifically, one staff member should be delegated to administer the programs and a public awareness program should be developed in conjunction with the development of guidelines for defining program requirements.

9.9 NON-TRADITIONAL REVENUE SOURCES

A. Land Banking

The cost of land banking sites for future park development can be minimized by interim land uses that generate revenue. For example interim use of park sites include: park and ride facilities, interim use of park sites for agriculture and landscape growing areas, use of park sites for low-intensity storage (lumber, building materials, machinery, etc.). These types of interim uses can generate revenue from the land pending its eventual development for recreation uses.[4]

B. Development Approvals

The city should be mindful of proposed development projects requiring variances or special approvals, such as density bonuses which might offer the opportunity to negotiate for park and open space improvements. However, the city should not "trade" density for open space, as the two are separate issues, each with its own consideration.

C. Lease Back

Longer term non-traditional uses of excess land associated with park development can generate revenue to service the debt or at least part of

the debt to acquire not only the site used for non-traditional land lease but also portions of the site used for park and recreation activities. Precedents for these types of land uses include some residential uses (mobile home parks, etc.), highway-oriented retail uses, lease of key sites within a park environment for a restaurant operation, hotel and motel land leases, and possible long-term use for office or industrial purposes in which the rent from the land lease exceeds the debt service required from the land lease itself making a contribution to debt service on the cost of acquiring those portions of the site used for recreation purposes.[4]

RECOMMENDATIONS:

The city should aggressively pursue opportunities for non traditional revenue sources. One staff member should be delegated to coordinate and administer the programs. A public awareness program in conjunction with the development of guidelines defining eligibility requirements should be developed.

9.10 SUMMARY OF RECOMMENDATIONS

Table 9.2 summarizes the recommended financial mechanisms available to the City of Signal Hill at this time. Table 9.2 also includes an estimate of the potential revenues anticipated from each program.

TABLE 9.2

Summary of Funding Recommendations

1. Source General Fund - Maintenance and Recreational Program Allocation

Use:	Maintenance and upkeep of existing park facilities, recreation programming, staff.
Recommendations:	Keep at current level, increase commensurate to increases in parkland area and facilities inflation.
Estimated Revenue: Yearly	$786,510 (1988)

2. Source General Fund - Capital Replacement Fund

Use:	Replacement of capital improvements in parks and open space facilities as they become wor out or obsolete.
Recommendations:	Establish replacement fund based upon estimated value of capital improvements divided by anticipated life expectancy.
Estimated Revenue: Yearly	$111,800 (1989)

3. Source Development Fees

Use: Acquisition and Development

Recommendations:

A. Revise the subdivision ordiance park and recreation fee (Quimby Act) to $7,700 for each single family dwelling or multi-family dwelling. (Assuming $20 sf land value, the contribution would be revised to 385 sf per unit.)

B. Adopt a new $7,700 per dwelling unit developer fee for new residential units which are currently not subject to the subdivision ordinance park and recreation fee. (AB 1600 developer fee based on 385 sf per unit.)

C. Adopt a new $.35 per square foot developer fee for new commercial development.

Estimated Revenue:
20 Year Total $10,000,000 to $13,000,000

4. Source Redevelopment Agency Contribution

Use: Acquisition and Development

Recommendation: Pledge a portion of anticipated tax increment from new development within the project area to park acquisition and development.

Estimated Revenue:
20 Year Total $2,789,606

5. Source: Grant Program

Use:	Varies, dependent on conditions of grants.
Recommendations:	Assign staff to coordinate all Signal Hill Grants, aggressively pursue all opportunities.
Estimated Revenue: Yearly	Establish yearly goal for Parks and Recreation.
	$30,000 (1989)

6. Source User Fees

Use:	Maintenance and Operations
Recommendations:	Establish modest fees to supplement operatio costs of permit and specialized events.
Estimated Revenue: Yearly:	Less than $2,500

TABLE 9.3

FUNDING SOURCES

	SOURCES	AMOUNT	
1.	General Fund	Yearly	20 Years
	A. Maintenance Recreation Program Allocation	$ 786,510	
	B. Capital Replacement	$ 111,800	
2.	Development Fees		
	A. Quimby		$ 9,394,000
	B. AB1600		$ 1,344,000
3.	Agency Contribution		$ 2,789,606
4.	Grants (Goal)	$ 30,000	
5.	User Fee	$ 2,500	
TOTALS		$ 930,810	$13,527,606

CHAPTER TEN

PHASING AND IMPLEMENTATION STRATEGY

10.1 PHASING AND IMPLEMENTING RECOMMENDATIONS

One of the major challenges in implementing a comprehensive Master Plan is the phasing of improvements. Recreation demand and desires, combined with the resources available from the city's staffing and financial concerns make this a complex task. Further complicating the issue is the reliance on development-related funding to support improvements (eg. Quimby or AB1600 fees). To summarize, there are two fundamental issues to consider; 1) what improvements to do first, and 2) how to fund these improvements.

10.2 PRIORITY OF IMPROVEMENTS

Chapter 8 outlined the priorities for recreation improvements to be undertaken. These can be summarized as follows:

A. Upgrade and better utilize the LBUSD school sites,
B. Develop a park in the underserved west side of town,
C. Develop a Hilltop Park,
D. Upgrade Signal Hill Park,
E. Develop park trails and city walkway system,
F. Develop the Discovery Well site,
G. Develop a Hilltop Reservoir Park in conjunction with the new reservoir,

H. Expand the city wide walkway system,

I. Study feasability of a Citywide Bikeway System.

The rationale behind this ordering of improvements lies in the belief that improvements that best serve the city's recreation needs for the most modest financial commitment should be addressed first. Projects requiring extensive acquisition and development costs, with a potential reliance on future development funds, should be implemented as funding becomes available.

The development of a city wide walkway and bikeway system is tied to both existing and future development projects. As such, it can be built in segments and put together over time to form the entire system, once a commitment to implement it is made.

10.3 FINANCING IMPROVEMENTS

Although the Master Plan does not fully rely on development fees, they do constitute a major portion of the recommended funding. This is particularly true with regards to new facilities that require the consideration of acquisition and development costs, along with increased maintenance expenditures.

When considering the funding available from development fees, it is important to realize that potential fees generated are: 1) primarily intended to serve the residential population that will occupy the new housing, and 2) the cash flow is unpredictable and dependent on when development takes place.

Because of this uncertainty in cash flow, it is recommended that the city consider the issuance of general obligation bonds to allow for the acquisition of priority sites and or upgrading of other facilities in the near term, with the intent that future funds collected will be applied (in part) to the repayment of these debts.

Because the City recognizes the benefit to be derived from comprehensive development of the "Hill", it is recommended that a Master Development Plan be proposed.

Comprehensive development of the "Hill" should encourage privately funded construction of the parks and trails prescribed by the Master Plan. When parks and trails are developed privately as part of a Master Development Plan, credit equivalent to the public cost of such construction should be given to the developer.

Another factor to consider is that the funds made available from the proposed broad based funding strategy in themselves may never be adequate to undertake more costly improvements;

eg. the $44,000 from Quimby monies collected will not fund the $3,000,000 to develop a Hilltop Park. However, putting money "in the bank" until a sizable fund is accrued seems equally nonproductive.

10.4 IMPLEMENTING THE MASTER PLAN

With the previous funding strategies in mind, and the priorities established for new and improved recreational facilities and programs, the following is a summary of the major steps the City needs to undertake to assure funding and implementation of the Master Plan recommendations.

A. Formally adopt the Parks and Recreation Master Plan, as prescribed by the General Plan Land Use and Environmental Resources Elements.

B. Adopt an AB1600 Development Fee Ordinance. As described in Chapter Nine, the city will need to adopt a new development fee ordinance, supplementing the existing Quimby ordinance.

C. Increase General Fund Commitments, as outlined in Chapter 9.

D. Actively Pursue Grant Programs.

E. Set Aside Funds For Future Acquisition And Development. Establish a policy whereby monies for all recreation facility improvements not specifically allocated, be divided, with 50% going towards short term improvements (such as the LBUSD school upgrades, and 50% being set aside for future acquisition and park development.

10.5 CLOSING STATEMENT

The comprehensive Parks and Recreation Master Plan outlined in this report offers an exciting vision for the City of Signal Hill. With the adoption of this plan the city will commit to the improvement of the quality of life for its residents and those who work and visit the city. Future generations will most appreciate the foresight of today's decisions as they stand on the top of the Hill, and marvel at the view.

To achieve this will require a dedication and commitment to this plan, and numerous difficult decisions. However, once undertaken, we are confident the results will more than outweigh the difficulties in achieving the programs outlined.

Pod Inc. is pleased to have participated with the City in the development of this Plan and stands ready to assist in any way possible to see its successful undertaking.

APPENDIX A

REFERENCES CITED

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2. _____. Hilltop Specific Plan. Prepared by Donald A. Cotton Associates, Pasadena, California. July, 1983.

3. City of Long Beach. Bike Route System. Department of Public Works, Long Beach, California, November, 1982

4. City of Corona. Parks, Recreation and Open Space Master Plan. Prepared by POD, Inc., Santa Ana, California, July, 1988

5. City of Signal Hill. 1987/1988 Annual Operating Budget. Signal Hill, California, July 1987.

6. Inter-City Memorandum. Park and Recreation Dedication Fees. To the Honorable Mayor and Members of the City Council, from the City Manager, February 2, 1988.

7. City of San Jose. Parks and Recreation Department. Parks and Recreation Planning Study, Phase III-A. San Jose, California, March, 1987.

8. Phone Interview with Bonnie L. Cabrinha, Assessment Revenue Analyst, City of Rancho Cucamonga.

9. Phone Interview with Frank Basile, Director of Public Services, City of San Dimas.

Appendix B

Bibliography

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Freilich, Stone, Leitner & Carlisle. Conference on Assembly Bill 1600: An Act Relating to Developer Fees. Los Angeles, California, July 22, 1988.

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_____. Planning - Zoning and Development Laws. Sacramento, California; Office of the State Printer, March, 1988.

The California Consortium. The New Quimby Act: Parkland Dedication and Fees Handbook. Sacramento, California, June, 1983.

Appendix C

Organizations, Agencies and Persons Consulted During Preparation of Master Plan

Public Agencies

California State Department of Forestry
Jim Gieger, Staff Forester, Urban Forestry Program

City of San Dimas, Public Services Department
Frank Basile, Director Public Services

City of Long Beach, Department of Financing
Tony Walstrum

City of Rancho Cucamonga, Assessment & Revenue Department
Bonnie L. Cabrinha, Assessment Revenue Analyst

City of Signal Hill
Vicki Baker, Financing

City of Los Angeles, Parks & Recreation Department
Joel Breitbart

Long Beach Parks & Recreation Department
Ralph Scryder, Director Parks and Recreation

Long Beach Unified School District
Mary Ann Mays

State of California, Parks and Recreation, Grants Section
Shirley Willd Wagner, Local Project Director

State of California Recreation & Technical Services Division

State of California Office of Historical Preservation
Marian Mitchell Wilson

San Jose Parks and Recreation Department
John Guisto, Chief of Park Planning

Private Organizations/Individuals

American Youth Soccer Association
Gerry Knight

Heartwell Bobby-Sox
Karon Allison

Long Beach Adult Soccer Association
Chester Holt

American Youth Soccer Association
Jeff Rowe

Long Beach Little League
Bob Skidmore

Long Beach Women's Soccer Association
Bertha Velasco

Alamitos Land Company
Gene Smith, Llewellyn Bixby, Dave Anderson

R. P. Lavrain & Associates
Ron Lavrain, Appraiser/Consultant

Signal Hill Petroleum
Craig Barto

American Gymnastics Academy
Cynthia Saari, Owner

Sierra Club
Bob Yinger, Chairman Long Beach Section

Long Beach YMCA
Lakewood YMCA
Bellflower YMCA
Los Altos YMCA

2175 CHERRY AVENUE • SIGNAL HILL, CALIFORNIA 90806 • (213) 426-7333

CITY OF SIGNAL HILL

CENTER OF PROGRESS

Dear Signal Hill Resident:

The City of Signal Hill is preparing a Master Plan for development of recreation and parks in Signal Hill. The Plan will recommend what additional parks and recreation facilities will be needed in the future, as well as what improvements are needed to existing facilities.

A team of consultants with experience in park planning have been hired to assist us. They are working with the Parks and Recreation Commission, City Council, Planning Commission, and residents to develop the Master Plan.

We want to be sure to plan for those activities that you would most like to see in our community. We ask that you consider your entire family's needs when answering each question. Please complete the survey and return it in the enclosed envelope by July 30, 1988.

Your responses will remain completely anonymous. Your survey will play an important part in the recreation and parks planning process. We look forward to receiving your response.

If you have any questions regarding this project, please contact Genise Homan, Director of Community Services, at (213) 426-7333, ext. 306. Thank you for assisting us in planning for your future recreation and parks needs.

Sincerely,

Sara Hanlon
Mayor

Please take a few moments to help us by completing the following survey and returning it in the enclosed pre-stamped envelope by July 30, 1988.

The survey will take about ten minutes to complete. We ask that you carefully read each question and then answer by circling or filling in the appropriate response.

Please consider both you and your family's use of the recreation facilities available to Signal Hill's residents. (See the enclosed map and list of Signal Hill's recreation facilities for assistance.)

1) How frequently have you or your family participated in the following activities during the past twelve months (including outside of Signal Hill)?

	A few times a week	A few times a month	A few times a year	Seldom or never
Picnic	1	2	3	4
Playgrounds	1	2	3	4
Tot lots	1	2	3	4
Softball	1	2	3	4
Baseball	1	2	3	4
Football	1	2	3	4
Soccer	1	2	3	4
Bicycling	1	2	3	4
Roller skating	1	2	3	4
Golf	1	2	3	4
Skateboarding	1	2	3	4
Tennis	1	2	3	4
Volleyball	1	2	3	4
Basketball	1	2	3	4
Exercise course	1	2	3	4
Classes				
For children 1-9	1	2	3	4
For youths 10-19	1	2	3	4
For adults	1	2	3	4
Swimming	1	2	3	4
Walking or hiking	1	2	3	4
Running/jogging	1	2	3	4
Performing arts	1	2	3	4
Crafts classes	1	2	3	4
Fitness classes	1	2	3	4
Other: _____	1	2	3	4

2) During the past year, how often have you or your family visited the following: (Please refer to enclosed map/list)

	A few times a week	A few times a month	A few times a year	Seldom or never
Hinshaw Park (Cherry/21st)	1	2	3	4
Reservoir Park (Wardlow/Gundry)	1	2	3	4
Hillbrook Park (Temple/Wall)	1	2	3	4

3) How do you or your family typically travel to Signal Hill's parks?

1 Walk 2 Bicycle 3 Car 4 Don't Use

4) We would like to know a little more about your use of Signal Hill's parks:

a. Which one of the following parks is closest to your home?

1 Hinshaw 2 Reservoir 3 Hillbrook

b. How frequently do you use it?

1 Every day
2 A few times a week
3 A few times a month
4 A few times a year
5 Special events only
6 Never use

c. What are you or your family's favorite activities in the park? (Circle all that apply.)

1 Strolling for enjoyment
2 Jogging or walking for exercise
3 Picnicking
4 Field sports (specify) _____
5 Children's playground
6 Organized event or program (specify) _____
7 Other (specify) _____

d. What is the best thing about your neighborhood park? (describe)

_____

_____

e. What is the worst thing about your neighborhood park? (describe)

_____

_____

f. What one improvement would you make to your neighborhood park?

_____

_____

5) Overall, how would you rate Signal Hill's Parks for each of the following:

	Good	Fair	Poor	Don't Know	
Convenience of location	1	2	3	4	C51
Types of facilities within the Park	1	2	3	4	
Landscape attractiveness	1	2	3	4	
Security	1	2	3	4	
Quality of maintenance	1	2	3	4	
Programs available	1	2	3	4	

6) Please tell us about your family's recreational use of the **School Facilities** in Signal Hill.

a. Do you or your family use any school facilities for recreational activities?

1 Yes 2 No C57

b. If "yes," which school do you usually visit?

_____

c. What was the primary recreational purpose for your last visit to the school listed above?

(Describe)_____

_____

7) Please indicate if you feel the recreational needs of the following groups are being met adequately or not adequately by the recreational facilities in Signal Hill.

	More than adequate	Adequate	Not Adequate	
Tots (0-4 yrs.)	1	2	3	C62
Children (5-9)	1	2	3	
Preteens (10-12)	1	2	3	
Teenagers (13-17)	1	2	3	
Young adults (18-23)	1	2	3	
Adults (24-55)	1	2	3	
Seniors (56 and over)	1	2	3	
Handicapped/Disabled	1	2	3	C69

8) Do you ever use recreation facilities and parks located outside of Signal Hill?

1 Almost always C70
2 Sometimes
3 Seldom or not at all

9) a. Please tell us the names of the facilities yo frequently use outside of Signal Hil

_____

_____

_____

_____

b. What activities do you participate in there?

(Describe)_____

_____

_____

_____

10) What is your primary reason for using recreatio facilities located outside of Signal Hill? (Circ one).

The Signal Hill facilities . . .

1 are not conveniently located.
2 don't offer the activities or programs I like
3 are too crowded.
4 are in poor physical condition.
5 staff is not always as helpful as I would like
6 are not available to my friends or re s
7 Other (describe) _____

_____

_____

11) Do you think Signal Hill needs more parks?

1 Yes 2 No 3 Don't Know

12) If Signal Hill were to add new recreationa facilities, which three would be most important t you? (Please circle your three top choices. Fee free to add your own recommendations).

1 Baseball/softball fields
2 Basketball courts
3 Tennis courts
4 Community swimming pool
5 Bicycle paths
6 Strolling/jogging path
7 Exercise course
8 Tot lot/children's play areas
9 Indoor recreation center
10 Gymnasium
11 More landscaped open space/park
12 Picnic areas
13 Viewing promenade/overlook on the Hill
14 Other (describe) _____
15 Other (describe) _____
16 None

13) a. If Signal Hill were to add new educational and supervised recreation programs, which two would be most important to you? (Please circle your two top choices. Feel free to add your own recommendations).

1 Nature
2 Sports
3 Entertainment
4 Civic/historic
5 Children's programs
6 After-school child care
7 Arts and crafts
8 Other (describe) _____
9 None/would not be interested

b. Would you be willing to pay a modest fee to have these programs available?

1 Yes 2 No

Past research has shown that people with different family compositions, income, and educations have differing ideas about recreation. We want to know if this is true for Signal Hill. All information is strictly confidential.

14) Using the attached map, please indicate the number of the area where you live.

#1 #2 #3 #4 #5

15) How long have you lived in Signal Hill?

_____year(s)

16) Do you own or rent/lease your present home?

1 Own 2 Rent/Lease

17) How many people in each age group are presently living in your household?

No. persons	Age
_____	Under 5
_____	5—9
_____	10—19
_____	20—29
_____	30—39
_____	40—49
_____	50—64
_____	65 +

equals _____total in household

18) Please circle the category below which best describes your total household income in 1987.

1 Under $ 15,000
2 $ 15,001—$ 30,000
3 $ 30,001—$ 50,000
4 $ 50,001—$ 75,000
5 $ 75,001—$100,000
6 Over $100,000

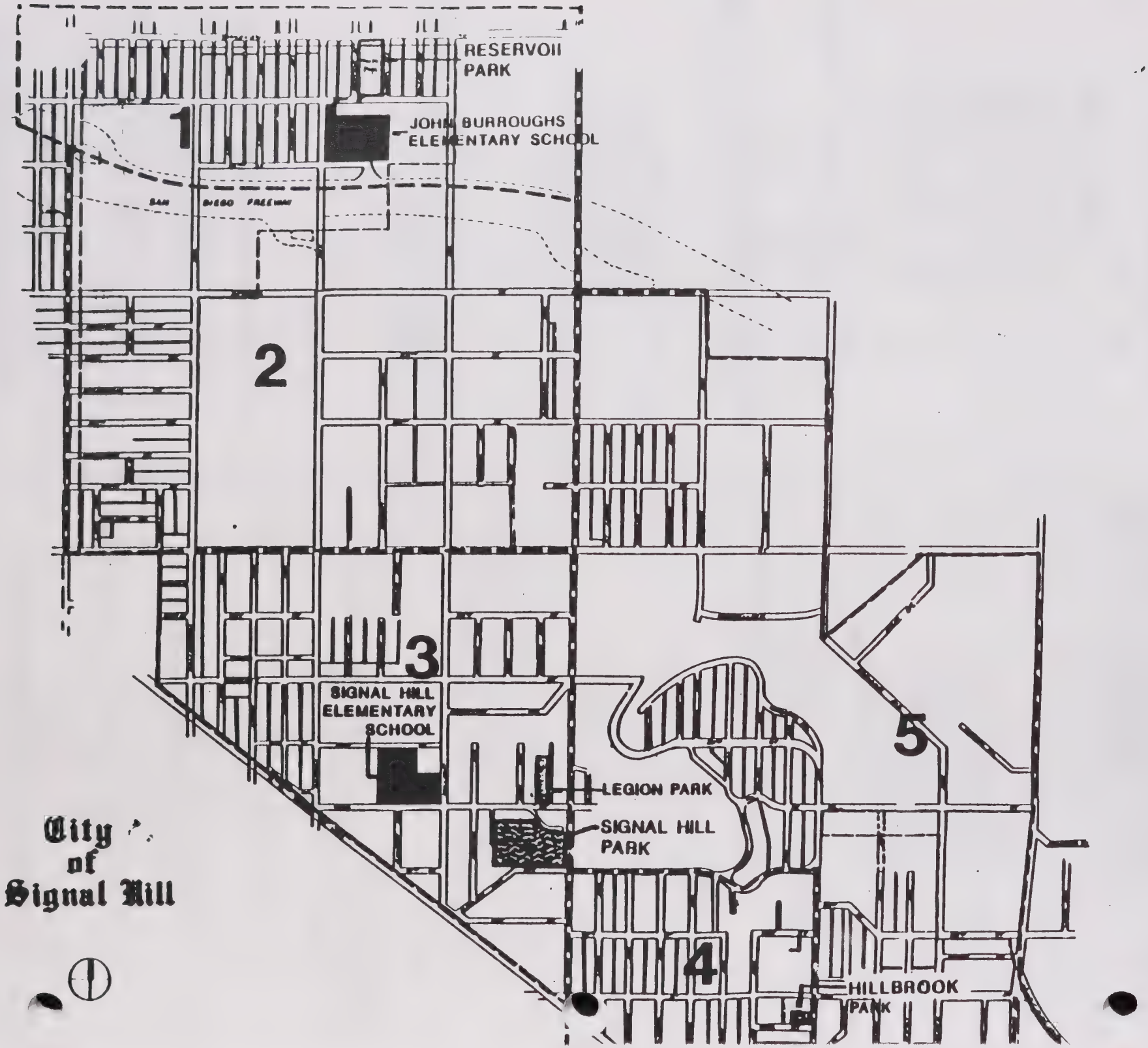
19) Do you have any health limitations or handicaps which restrict your mobility or use of any Signal Hill Recreation Facilities?

1 Yes 2 No

20) Is there anything you would like to add? _____

THANK YOU!

Please return the survey by July 30, 1988 using the enclosed pre-stamped envelope.


RESERVOIR PARK
JOHN BURROUGHS ELEMENTARY SCHOOL
SAN DIEGO FREEWAY
1
2
3
4
5
SIGNAL HILL ELEMENTARY SCHOOL
LEGION PARK
SIGNAL HILL PARK
HILLBROOK PARK
City of Signal Hill

APPENDIX E

SIGNAL HILL SURVEY INCLUDING RESULTS

Please take a few moments to help us by completing the following survey and returning it in the enclosed pre-stamped envelope by July 30, 1988.

The survey will take about ten minutes to complete. We ask that you carefully read each question and then answer by circling or filling in the appropriate response.

Please consider both you and your family's use of the recreation facilities available to Signal Hill's residents. (See the enclosed map and list of Signal Hill's recreation facilities for assistance.)

1) How frequently have you or your family participated in the following activities during the **past twelve months** (including outside of Signal Hill)?

	A FEW TIMES A WEEK	A FEW TIMES A WEEK	A FEW TIMES A WEEK	SELDOM OR NEVER
Picnic	2.6	10.3	44.1	92.9
Playgrounds	8.2	11.2	18.4	62.9
Tot lots	4.0	5.6	7.8	82.6
Softball	2.4	8.5	17.3	71.7
Baseball	2.2	3.7	10.7	83.4
Football	1.2	2.5	12.2	84.1
Soccer	1.6	1.6	5.8	91.1
Bicycling	14.1	19.4	21.9	44.6
Roller Skating	3.0	5.4	11.5	80.1
Golf	6.5	9.7	11.5	72.3
Skateboarding	3.3	3.5	4.4	88.8
Tennis	8.5	9.7	16.3	65.4
Volleyball	3.5	7.7	17.4	71.4
Basketball	4.6	8.2	11.6	75.7
Exercise course	11.8	12.7	14.1	61.4
Classes				
For children 1-9	4.5	4.1	3.8	87.7
For youths 10-19	2.5	1.6	2.5	93.5
For adults	7.8	6.8	17.1	68.4
Swimming	18.6	18.9	16.4	46.1
Walking or hiking	31.7	27.6	17.0	27.7
Running/jogging	20.5	15.7	8.9	54.9

Performing arts	5.7	12.2	20.6	64.4
Crafts classes	2.8	6.8	14.8	75.6
Fitness classes	15.2	12.9	9.8	62.2
Other: _____	1	2	3	4

2) During the past year, how often have you or your family visited the following: (Please refer to enclosed map/list)

	A FEW TIMES A WEEK	A FEW TIMES A WEEK	A FEW TIMES A WEEK	SELDOM OR NEVER
Hinshaw Park (Cherry/21st)	7.0	13.9	25.5	53.6
Reservoir Park (Wardlow/Gundry)	3.4	5.5	9.2	81.8
Hillbrook Park (Temple/Wall)	4.3	8.1	10.0	77.5

3) How do you or your family typically travel to Signal Hill's parks?

1	Walk	39.1
2	Bicycle	3.1
3	Car	17.8
4	Don't Use	40.0

4) We would like to know a little more about your use of Signal Hill's parks:

a. Which one of the following parks is closest to your home?

1	Hinshaw	65.6
2	Reservoir	13.8
3	Hillbrook	20.6

b. How frequently do you use it?

1	Every day	3.2
2	A few times a week	10.3
3	A few times a month	19.5
4	A few times a year	18.3
5	Special events only	11.0
6	Never use	37.8

c. What are you or your family's favorite activities in the park? (Circle all that apply.)

1	Strolling for enjoyment	53.1
2	Jogging or walking for exercise	38.5
3	Picnicking	37.1
4	Field sports (specify)	9.5
5	Children's playground	3.1
6	Organized event or program (specify)	20.8

d. What is the **best** thing about your neighborhood park? (describe)

See attachment.

e. What is the **worst** thing about your neighborhood park?

See attachment.

f. What one improvement would you make to your neighborhood park?

See attachment.

5) Overall, how would you rate Signal Hill's Parks for each of the following:

	Good	Fair	Poor	Don't Know
Convenience of location	59.5	17.5	5.6	17.5
Types of Facilities within the Park	23.2	35.3	15.2	26.5
Landscape attractiveness	37.4	34.2	10.2	18.2
Security	22.5	24.7	19.4	33.4
Quality of maintenance	34.2	35.7	7.0	23.1
Programs available	19.4	21.2	13.0	46.3

6) Please tell us about your family's recreational use of the School Facilities in Signal Hill.

a. Do you or your family use any school facilities for recreational activities?

1	Yes	7.3
2	No	92.7

b. If "yes," which school do you usually visit?

Burroughs	57.5	S.H.E.	42.5

c. What was the primary recreational purpose for your last visit to the school listed above?

(Describe)	Basketball	36.0
	Running	10.0
	Other	73.0

7) Please indicate if you feel the recreational needs of the following groups are being met adequately or not adequately by the recreational facilities in Signal Hill.

	More than adequate	Adequate	Not Adequate
Tots (0-4 yrs.)	19.3	56.0	24.7
Children (5-9)	23.3	59.1	17.6
Preteens (10-12)	16.5	50.5	33.0
Teenagers (13-17)	11.8	44.8	44.8
Young adults (18-23)	9.3	47.2	43.8
Adults (24-55)	8.8	46.2	45.0
Seniors (56 and over)	20.6	49.7	29.7
Handicapped/Disabled	11.5	49.4	39.0

8) Do you ever use recreation facilities and parks located outside of Signal Hill?

1	Almost always	31.7
2	Sometimes	45.3
3	Seldom or not at all	23.0

9) a. Please tell us the names of the facilities you frequently use outside of Signal Hill:

See attachment.

b. What activities do you participate in there?

	Picnic	29.6	Swim	10.8
(Describe)	Walk	20.0	Golf	9.2
	Bike	15.3	Baseball/	
	Tennis	11.1	Softball	7.7

10) What is your primary reason for using recreation facilities outside of Signal Hill ? (Circle one.)

The Signal Hill facilities ...

1	are not conveniently located.	5.2
2	don't offer the activities or programs I like.	41.9
3	are too crowded.	3.0
4	are in poor physical condition.	5.2
5	staff is not always as helpful as I would like.	.7
6	are not available to my friends or relatives.	7.1
7	Other (Describe)	34.0

11) Do you think that Signal Hill needs more parks?

1	Yes	46.6
2	No	32.1
3	Don't Know	31.3

12) If Signal Hill were to add new recreational facilities, which three would be most important to you? (Please circle your three top choices. Feel free to add your own recommendations.)

Rank			
10	1	Baseball/softball fields	8.1
12	2	Basketball courts	7.2
6	3	Tennis courts	21.6
5	4	Community swimming pool	28.3
4	5	Bicycle paths	34.0
3	6	Strolling/jogging path	34.3
8	7	Exercise course	13.6
9	8	Tot lot/children's play areas	12.6

13	9	Indoor recreation center	6.7
11	10	Gymnasium	7.5
2	11	More landscaped open space/parks	34.8
7	12	Picnic areas	15.0
1	13	Viewing promenade/overlook on the Hill	43.6
14	14	Other (describe)	3.8
15	15	Other (describe)	3.4
	16	None	

13) a. If Signal Hill were to add new educational and supervised recreation programs, which two would be most important to you? (Please circle your two top choices. Feel free to add your own recommendations.)

Rank			
2	1	Nature	90
3	2	Sports	30.4
1	3	Entertainment	23.8
7	4	Civic/historic	31.0
4	5	Children's programs	11.2
6	6	After-school child care	20.3
5	7	Arts and crafts	14.5
	8	Other (describe) _____	18.9
	9	None/would not be interested	

b. Would you be willing to pay a modest fee to have these programs available?

1	Yes	71.0
2	No	29.0

Past research has shown that people with different family compositions, income and educations have differing ideas about recreation. We want to know if this is true for Signal Hill. All information is strictly confidential.

14) Using the attached map, please indicate the number of the area where you live.

#1	12.4
#2	2.1
#3	24.8
#4	34.4
#5	26.4

15) How long have you lived in Signal Hill?

Years	
1-2	32.5
3-4	20.0
5-6	9.8
9-10	9.8
11-15	7.5
16-20	3.2
20+	10.5

16) Do you own or rent/lease your present home?

1	Own	63.3
2	Rent/Lease	37.6

17) How many people in each age group are presently living in your household?

No. of Persons	Age
8.3	Under 5
5.4	5-9
6.7	10-19
18.5	20-29
23.5	30-39
14.2	40-49
13.5	50-64
9.3	65+

18) Please circle the category below which best describes your total household income in 1987.

1	Under $15,000	8.1
2	$15,001 - $30,000	20.8
3	$30,001 - $50,000	31.8
4	$50,000 - $75,000	25.2
5	$75,001 - $100,000	8.9
6	Over $100,000	5.6

19) Do you have any health limitations or handicaps which restrict your mobility or use of any Signal Hill Recreation Facilities?

1 Yes 8.4
2 No 91.6

20) Is there anything you would like to add? _____

See attachment.

_____

_____

_____

_____

THANK YOU

Please return the survey by July 30, 1988
using the enclosed pre-stamped envelope.

FILE COPY

CITY OF SIGNAL HILL

2175 Cherry Avenue • Signal Hill, California 90806 • (213) 426-7333 • FAX (213) 427-3276

November 14, 1989

MEMORANDUM Staff Report No. 5

TO: HONORABLE CHAIRMAN
AND MEMBERS OF THE PLANNING COMMISSION

FROM: PLANNING DIRECTOR

SUBJECT: Parks and Recreation Master Plan

Recommendation

1. Motion to adopt Resolution No. 822-89 recommending adoption of Negative Declaration No. 11/7/89(1); and

2. Motion to adopt Resolution No. 823-89 recommending approval of General Plan Amendment 89-03; Parks and Recreation Master Plan; and

3. Motion to adopt Resolution No. 824-89 recommending adoption of Zoning Ordinance Amendment 89-16 adding Chapter 20.90 to the Municipal Code entitled "Park Development Fees" and establishing fees for new residential, commercial and industrial development.

Background

Approximately one year ago, the City Council authorized preparation of the Parks and Recreation Master Plan. Envisioned as a document which would make a clear statement of the City's open space and recreation goals, the plan would list, in order of priority, where new parks would be sited, how acquisition would be funded, and how park facilities would be maintained.

The Parks and Recreation Master Plan is a working document to be implemented concurrent with the development of the City during the next twenty years. Based on the City's General Plan goal of four acres/1,000 population, the plan provides for the orderly expansion of the City's open space and recreation program. Plan goal include a city-wide system of community and neighborhood parks linked by walking trails, wilderness corridors and bicycle trails. Preservation of public areas on the hilltop and development of parks in residential areas lacking adequate park are top priorities.

Funding recommendations include: establishment of a capital replacement program for park facilities as they become worn out; revision of the method and rate of assessing park development fees to help offset the cost of acquiring open space and parklands; Redevelopment Agency contributions for new park acquisition and development within the Redevelopment Project Area.

affirms

Adoption of the Parks and Recreation Master Plan as an element of the City's General Plan affirming the City's commitment to the preservation of open spaces. It will assure that both current and future residents will be provided comprehensive recreational opportunities.

Adoption of the Park Development Fee Ordinance implements the Parks and Recreation Master Plan recommendation that residential and commercial development share in the cost of providing new parks. The fee for commercial or industrial development would be $.35 per square foot. The fee for residential development would be based on the value of 450 square feet of land as estimated by an appraisal process. By way of example, the fee for a single family dwelling developed on land valued at $17 sq.ft. would be $7,650. In addition, the ordinance requries that the fees collected be placed in a fund to be used only for park acquisition, expansion or improvement.

Respectfully submitted,

Gary Jones

GJ/vma

Attachments

RESOLUTION NO. 822-89

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SIGNAL HILL, CALIFORNIA, RECOMMENDING ADOPTION OF NEGATIVE DECLARATION NO. 11/7/89(1) FOR GENERAL PLAN AMENDMENT 89-03 AND ZONING ORDINANCE AMENDMENT 89-16.

WHEREAS, pursuant to Article 6 of the State of California Environmental Quality Act Guidelines and the City of Signal Hill Environmental Impact Report Guidelines for the implementation of the California Environmental Quality Act, the proposed General Plan Amendment 89-03 and Zoning Ordinance Amendment 89-16 have been determined to be a project; and

WHEREAS, Negative Declaration No. 11/7/89(1) has been prepared and a Notice of Preparation was posted outside City Hall from November 3, 1989, through November 14, 1989, and published in the local newspaper on November 3, 1989; and

WHEREAS, the document was made available for public review and comments; and

WHEREAS, the Planning Commission held a public hearing on November 14, 1989, and all persons were given an opportunity to comment on the documents.

NOW, THEREFORE, BE IT RESOLVED, that the Planning Commission has considered the public comments and finds the following:

1. No significant environmental impacts will result from adoption of proposed General Plan Amendment 89-03 and Zoning Ordinance Amendment 89-16 pursuant to the mitigation measures contained in Negative Declaration 11/7/89(1); and

2. The proposed project promotes consistency among the Signal Hill General Plan, the Zoning Ordinance and the Redevelopment Plan in that the proposed project complies with all existing and proposed City standards.

BE IT FURTHER RESOLVED, that the Planning Commission hereby recommends adoption of Negative Declaration No. 11/7/89(1) subject to Mitigation Measures and Monitoring Program attached hereto as Exhibit A.

PASSED, APPROVED, AND ADOPTED, at a regular meeting of the Planning Commission on this 14th day of November, 1989, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

MICHAEL NOLL, CHAIRMAN
SIGNAL HILL PLANNING COMMISSION

ATTEST:

GARY JONES
PLANNING DIRECTOR

Type of Permit & File No. General Plan Amendment 85-03
Zoning Ordinance Amendment 85-16

City of Signal Hill
Planning & Community Development Department

INITIAL STUDY

1. Name and address of Applicant: City of Signal Hill
2175 Cherry Ave
Signal Hill, Ca

2. Description of Project (Discretionary Approvals): General Plan Amendment; Parks and Recreation Master Plan and Zoning Ordinance Amendment; Development Fees for Parks

3. Location of Project and Legal Description: Entire City of Signal Hill

4. Environmental Setting: urban area and developing oilfield some hilly terrain

5. Compatibility with General Plan/Zoning/Redevelopment Plan: The proposed amendments further the goals of the General Plan and Redevelopment Plan

6. Potential Impacts: See Attached

7. Mitigation Measures/Conditions: See Attached

8. Comments: None

Does the project:	Yes	No	Maybe
Earth Resources			
1. Create unstable earth conditions or change geologic substructures?	○	●	○
Disrupt, displace, compact or overcover the soil?	○	●	○
3. Change topography or ground surface relief features?	○	●	○
4. Cause flooding, erosion or siltation?	○	●	○
5. Expose people or structures to geologic hazards?	○	●	○
6. Destroy or modify unique geologic or physical features?	○	●	○
Atmospheric Resources			
1. Generate emissions (gases, chemicals, particulates, clarity and odor) or deteriorate ambient air quality?	○	●	○
2. Alter air movement, moisture, temperature or change micro climate or patterns?	○	●	○
Water Quality			
1. Substantially degrade water quality	○	●	○
2. Interfere with ground water recharge?	○	●	○
3. Change absorption rates, drainage patterns or the rate and amount of surface water runoff?	○	●	○
4. Contaminate a public water supply?	○	●	○
5. Expose people or property to water related hazards, i.e., flooding?	○	●	○
Biota			
Change the diversity, or number of, any species of plant or animal?	○	●	○
2. Introduce new species of plant or animal into an area or affect the normal replenishment of existing species?	○	●	○
3. Affect any unique, rare or endangered species of animal or plant?	○	●	○
4. Deteriorate or diminish existing fish, wildlife, or plant habitat?	○	●	○
Noise			
1. Increase the ambient noise levels for adjoining areas?	○	○	●
2. Expose people to severe noise levels?	○	●	○
Light and Glare			
1. Produce new light or glare?	○	●	○
Natural Resources			
1. Increase use of any natural resources?	○	●	○
2. Substantially deplete any non-renewable resource?	○	●	○
Human Health			
1. Create a public health or safety hazard or potential hazard?	○	●	○
2. Create risk of an explosion or release of hazardous substances in event of accident or upset condition?	○	●	○
3. Interfere with an emergency response plan or emergency evacuation plan?	○	●	○
Scenic Qualities			
1. Have a demonstrable negative aesthetic effect?	○	●	○
2. Alter site integrity?	○	●	○
3. Obstruct existing views?	○	●	○

	Yes	No	Maybe
Community Disruption:			
1. Induce substantial growth or concentration of population?	○	●	○
2. Displace a large number of people?	○	●	●
3. Disrupt or divide the physical arrangement of an established community?	○	○	●
4. Affect existing housing or create a demand for additional housing?	○	●	○
5. Substantially alter the present or planned land use of the area?	○	●	○
Transportation/Circulation			
1. Generate additional vehicular movement?	○	●	○
2. Affect existing parking facilities or demand new parking?	○	●	○
3. Impact existing transportation systems?	○	●	○
4. Alter present patterns of circulation or movement of people and/or goods?	○	●	○
5. Increase traffic hazards to motor vehicles, bicyclists or pedestrians?	○	●	○
Public Services			
1. Affect or result in a need for new or altered governmental services in any of the following areas:	○	●	○
a. Fire protection?	○	●	○
b. Police protection?			
c. Schools?	○	○	●
d. Parks or other recreational facilities?	○	○	●
e. Maintenance of public facilities including roads?	○	○	●
f. Other governmental services?	○	●	○
Energy			
1. Use substantial amounts of fuel or energy?	○	●	○
2. Substantially increase demand for existing sources of energy or require the development of new sources of energy?	○	●	○
Utilities			
1. Create a need for new sytems or significant alterations to the following utilities:	○	●	○
a. Power or natural gas?	○	●	○
b. Communications systems?	○	●	○
c. Water?	○	●	○
d. Sewer or septic tanks?	○	●	○
e. Storm water drainage?	○	●	○
f. Solid waste and disposal?	○	●	○
Cultural Resources			
1. Disrupt or alter a significant archaeological, historical or paleontological site, structure, object or building?	○	○	●
2. Change unique ethnic or religious, cultural value or use?	○	●	○
3. Change quality or quantity of existing educational or scientific institutions?	○	●	○

Type of Permit: Use Permit (CUP)

File No.: GP-8903 & ZOA 85-16

Mandatory Findings of Significance:	Yes	Maybe	No
Does the project have:			
1. The potential to degrade the quality of the environment, substantially reduce fish or wildlife habitat, cause a fish or wildlife population to drop below self sustaining levels, therefore, to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or pre-history?	—	—	✓
2. The potential to achieve short term to the disadvantage of long term environmental goals? (A short term impact on the environment is one which occurs in a relatively brief definitive period of time while long term impacts extend long into the future)?	—	—	✓
3. Impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect on the total of those impacts on the environment is significant?	—	—	✓
4. Environmental effects which cause substantial adverse effects on human beings, either directly or indirectly?			

Additional Discussion of Environmental Evaluation:

Attached

Determinations:

On the basis of the environmental assessment:

I find the proposed project will not have a significant effect on the environment.

I find that although the proposed project may have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described above have been added to the project.

I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. The potential significant effects have been identified above.

Reviewed by: _____ Date: 11/4/85

CITY OF SIGNAL HILL
ENVIRONMENTAL QUALITY ACT
NEGATIVE DECLARATION NO. 11/1/85(-)

1. Applicant: City of Signal Hill

2. Type of Permit and File No.: General Plan Amendment 89-03
Zoning Ordinance Amendment 89-16

3. Description of Proposed Project:
See Attached

4. Mitigation Measures: The following mitigation measures, if any, will be included in the project to avoid potentially significant effects:
See Attached

5. Findings: The below-named persons and agencies, having examined the plans for the above-captioned project and on the basis of the initial study prepared and on file with the City as a public document, hereby find and determine that this project as proposed with the above-mentioned mitigation measures, if any, will have no significant impact upon the environment within the meaning of the Environmental Quality Act of 1970 and the City's E.I.R. Guidelines, and that no E.I.R. has been or will be prepared.

6. Notice: The City is required to give notice within a reasonable period of time of the final adoption of a Negative Declaration by publication once in a paper of general circulation, by posting on the site and in the area where the project is located, or by direct mailing to contiguous property owners. These requirements will be or have been met prior to approval of this Negative Declaration by the Planning Commission or the City Council. Any person may appeal any decision of the Director of Planning and Community Development or the Planning Commission to prepare or approve any Negative Declaration to the City Council. After final approval of the Negative Declaration to the City Council. After final approval of the Negative Declaration, a Notice of Determination shall be sent to the County Clerk.

Form of Notice: Publication in the Signal Hill Star Tribune on 11/3/89.

Approved By:

Name

City of Signal Hill
Agency

Planning Director
Title

11/7/89
Date

Additional Discussion

Project Description

General Plan Amendment 89-03; Proposed adoption of City of Signal Hill Parks and Recreation Master Plan setting forth the need for and general locations of additional park facilities, including the need for expansion and improvement of existing parks, and the means for financing same.

Zoning Ordinance Amendment 89-16; Proposed addition of Chapter 20.90 to the Municipal Code, entitled "Park Development Fees." Subject amendment would impose fees on new commercial, industrial, and residential construction according to the demand each such development is expected to generate for new and expanded park facilities as set forth in the Signal Hill Parks and Recreation Master Plan.

Discussion of project impacts

The Parks and Recreation Master Plan is a 20 year plan that will help the City achieve its General Plan goal of providing four acres per 1,000 population. The plan envisions a total of 48 acres of parks, open space and trails.

Development of parks should not affect earth resources, atmospheric resources, human health or scenic qualities, disrupt the community or impact transporation systems. However, further environmental review will be done in conjunction with any specific park project in order to evaluate construction impacts and recommend mitigation measures for individual sites.

Noise

1. Development of new parks facilities near to existing or proposed residential or commercial uses may increase ambient noise. Children at play, sports events, or community activities such as concerts in the park may disturb sensitive persons residing nearby.

Mitigation

Prior to development of any new parks, the City should commission acoustical studies to evaluate the potential negative noise impacts of planned recreational activities. The design and arrangement of park facilities shall incorporate findings and recommendations of the acoustical analysis.

Community Disruption

3. Disrupt or divide physical arrangment of an established community?

The Master Plan envisions acquisition of vacant oilfield, commercial or industrial land for development of new parks. Ideally, new parks can be located where they will help to provide a buffer between incompatible urban uses. However, acquisition will be market driven and future park sites may be considered disruptive by neighborhoods adjacent to the park sites.

Mitigation: The design of facilities shall be compatible with adjacent uses. The City shall conduct community workshops to find out if neighboring communities object to proposed parks, facilities and programs.

Public Services

1. Affect or result in a need for new or altered government services (i.e. parks and recreation personnel, police, and maintenance).

The addition of new parks or the expansion of existing parks will increase the demand for government services. Expanded recreational programs will require hiring of more recreation personnel. The increased surveillance burden of more parks may warrent hiring of additional police and the maintenance of new parks will require hiring of new maintenance personnel and purchase of maintenance equipment.

Mitigation: The Master Plan includes a funding program which describes how the City will pay for a larger parks system and expanded recreational program. The plan recommends that the City's General Plan Fund pay for park maintenance. A replacement fund would be established to replace worn out recreation facilities. Additional personnel would be paid from the General Fund.

Mitigation Monitoring Program

Project Phase: Design

Impact	Mitigation Measure	Evaluation Standard	Monitoring Responsibility	Schedule
Possible Disruption of Earth Resources Modify Unique Physical Features	Grading Plan & Building Plan	City Standards for Grading & Building	Public Works & Building Division	Further Environmental Evaluation of Construction impacts to be prepared in-conjuction with any specific park project.

Project Phase: Construction

Impact	Mitigation Measure	Evaluation Standard	Monitoring Responsibility	Schedule
Noise	Preparation of an Acoustical Analysis to evaluate potential impacts on surrounding sensitive land uses	Noise Ord.	Planning Department	Prior to development of future parks.

Project Phase: Community Disruption

Impact	Mitigation Measure	Evaluation Standard	Monitoring Responsibility	Schedule
Existing Developed Areas	Evaluate sites and design of parks prior to development.	Minimize impacts on uses	Planning Department	Prior to development of future parks.

Project Phase: Public Services

Impact	Mitigation Measure	Evaluation Standard	Monitoring Responsibility	Schedule
May require additional City personnel	Add personnel as required	City Management Recommendations	City Management	Concurrent with development of new park or addition of new programs

RESOLUTION NO. 823-89

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SIGNAL HILL, CALIFORNIA, RECOMMENDING CITY COUNCIL ADOPTION OF GENERAL PLAN AMENDMENT 89-03, RECOMMENDING APPROVAL OF THE PARKS AND RECREATION MASTER PLAN.

WHEREAS, the City of Signal Hill is contemplating development of the community and the need for an expanded open space and parks system;

WHEREAS, inclusion of the Parks and Recreation Master Plan in the General Plan has been deemed the appropriate mechanism for effectuating the desired results as envisioned in the plan; and

WHEREAS, the proposed Parks and Recreation Master Plan is the result of a year long public participation program including public workshops and community surveys; and

WHEREAS, notice of public hearing of the proposed General Plan Amendment was given in the Signal Hill Star Tribune on November 3, 1989, and posted outside City Hall from November 3, 1989, through November 14, 1989; and

WHEREAS, said public hearing was held on November 14, 1989, and interested parties were given an opportunity to express their opinions.

NOW, THEREFORE, BE IT RESOLVED, the the Planning Commission of the City of Signal Hill, California, does hereby recommend City Council adoption of General Plan Amendment 89-03.

PASSED, APPROVED, AND ADOPTED, at a regular meeting of the Planning Commission on this 14th day of November, 1989, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

MICHAEL NOLL, CHAIRMAN
SIGNAL HILL PLANNING COMMISSION

ATTEST:

GARY JONES
PLANNING DIRECTOR

RESOLUTION NO. 824-89

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SIGNAL HILL, CALIFORNIA RECOMMENDING ADOPTION OF ZONING ORDINANCE AMENDMENT 89-16 ADDING CHAPTER 20.90 TO THE MUNICIPAL CODE ENTITLED "PARK DEVELOPMENT FEES" AND ESTABLISHING FEES FOR NEW RESIDENTIAL, COMMERCIAL AND INDUSTRIAL DEVELOPMENT.

WHEREAS, the Planning Commission has adopted a new Parks and Recreation Master Plan for the City of Signal Hill which establishes and assesses the park and recreation needs for the future growth and development of the City; and

WHEREAS, the adopted Parks and Recreation Master Plan calls for the expansion and improvements of existing park facilities and the acquisition and development of new parks within the City in keeping with the future anticipated growth of the City; and

WHEREAS, achieving the park improvements and acquisitions proposed by the adopted plan will require funding which the City of Signal Hill cannot provide without the imposition of a developer fee to be placed upon new commercial, industrial and residential development; and

WHEREAS, the Planning Commission finds that a reasonable relationship exists between the need for funding for the improvement and acquisition of park facilities and the type of development projects for which the fee will be imposed; and

WHEREAS, the Planning Commission is committed to maintaining the same level of service and the same parkland-to-population ratio as existed prior to the adoption of this ordinance in order to ensure that, to the extent city growth occurs in the future, there will be added public parks and park programs; and

WHEREAS, the Planning Commission finds that, to the extent new development requires public parks, it is appropriate that the new developments should pay their fair share of the costs for such facilities.

NOW, THEREFORE, the Planning Commission of the City of Signal Hill, does hereby recommend approval of Zoning Ordinance Amendment 89-16 amending the Signal Hill Municipal Code by adding Section 20.90 Development Impact Fees attached hereto as Exhibit A.

PASSED, APPROVED, AND ADOPTED, at a regular meeting of the Planning Commission on this 14th day of November, 1989, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

MICHAEL NOLL, CHAIRMAN
SIGNAL HILL PLANNING COMMISSION

ATTEST:

GARY JONES
PLANNING DIRECTOR

ORDINANCE NO. 89-11-1043

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SIGNAL HILL, CALIFORNIA, CREATING CHAPTER 20.90, PARK DEVELOPMENT FEES, OF THE SIGNAL HILL MUNICIPAL CODE ESTABLISHING A PARK DEVELOPMENT FEE FOR NEW COMMERCIAL INDUSTRIAL AND RESIDENTIAL DEVELOPMENT.

WHEREAS, the City Council has adopted a new Parks and Recreation Master Plan for the City of Signal Hill which establishes and assesses the park and recreation needs for the future growth and development of the City; and

WHEREAS, the adopted Parks and Recreation Master Plan calls for the expansion and improvements of existing park facilities and the acquisition and development of new parks within the City in keeping with the future anticipated growth of the City; and

WHEREAS, achieving the park improvements and acquisitions proposed by the adopted plan will require funding which the City of Signal Hill cannot provide without the imposition of a developer fee to be placed upon new commercial, industrial and residential development; and

WHEREAS, the City Council finds that a reasonable relationship exists between the need for funding for the improvement and acquisition of park facilities and the type of development projects for which the fee will be imposed; and

WHEREAS, the City Council is committed to maintaining the same level of service and the same parkland-to-population ratio as existed prior to the adoption of this ordinance in order to ensure that, to the extent city growth occurs in the future, there will be added public parks and park programs; and

WHEREAS, the City Council finds that, to the extent new development requires public parks, it is appropriate that the new developments should pay their fair share of the costs for such facilities.

NOW, THEREFORE, the City Council of the City of Signal Hill, does hereby ordain as follows:

Section 1. That Title 20 of the Signal Hill Municipal Code is hereby amended by adding Section 20.90 Development Impact Fees to read as follows:

CHAPTER 20.90

Park Development Fees

20.90.010 Purpose. The purpose of this chapter is to provide a means by which the City can collect funds for the acquisition, improvement, and expansion of park facilities pursuant to the adopted Parks and Recreation Master Plan for the City of Signal Hill. The funds are to be collected as Parks Development Fees from developers of new commercial, industrial, and residential buildings in amounts which are reasonably related to the costs of providing additional facilities and recreation programs necessary to accommodate the demand for same as generated by the new developments.

20.90.020 Definitions. The following definitions shall apply to this Chapter:

A. "Affordable to low and very low income persons" means at rates consistent with the guidelines established by State Department of Housing and Community Development.

B. "Floor Area" means any useable area within a building or structure including storage and/or warehousing areas but excluding elevator shafts, stairwells, and parking within or below a building.

C. "New commercial/industrial development" means any commercial or industrial development projects, including additions and expansions, resulting in additional floor area, except as may be specifically exempted herein.

D. "New residential development" means a residential development project which results in one or more new dwelling units, except as may be specifically exempted herein.

E. "Qualified Appraiser" means a person generally recognized as a professional capable of providing an accurate estimate of fair market value in conformity with generally accepted principles and practices of the Society of Real Estate Appraisers and/or the American Institute of Real Estate Appraiser.

F. "Responsible Party" means a property owner, developer, contractor, architect, attorney or other person authorized by the property owner to process or participate in the processing of a development application.

G. "Very Low and Low Income Persons" means persons whose annual income meets the definitions for very low and low income persons as established by the State Department of Housing and Community Development.

20.90.030 Park Development Fee For New Commercial/Industrial Development. The following standards shall apply to new commercial and industrial development:

A. The responsible party for any new commercial or industrial development shall be required to pay a fee of not less than $.35 per square foot of floor area prior to issuance of a Certificate of Occupancy.

B. The per-square-foot fee levied as in Paragraph A above, shall be adjusted each January 1st from and after the effective date of this ordinance to reflect variations in the general price level. The annual adjustment shall be calculated using the Consumer Price Index, "All Urban Consumers," for the preceding 12-month period as published by the United States Department of Labor, Bureau of Labor Statistics for the Los Angeles-Anaheim-Riverside metropolitan area. In no event, however, shall the per-square-foot fee be less than thirty-five (35) cents.

20.90.040 Park Development Fee For New Residential Developments.

A. The responsible party for any new residential development shall be required to pay a Park Development Fee in lieu of dedication of 450 square feet of parkland for each dwelling unit in the development. The Park Development Fee shall be calculated as indicated below and shall be paid prior to issuance of Certificate(s) of Occupancy.

Park Development Fee = Fair Market Value of Land/Sq. Ft. X 450 Sq. Ft.

Fair market value shall mean the value of the land for the new residential development as determined by a qualified appraiser within a three-month period immediately prior to the date of date of issuance of a Certificate(s) of Occupancy for the new residential development. The qualified appraiser shall be selected by the Director of Planning.

In the event the responsible party disagrees with the fair market value determined as above, the responsible party may select a qualified appraiser who, together with the appraiser previously selected by the Director of Planning, shall select a third qualified appraiser. The three appraisers so selected shall determine the fair market value of the property, which determination shall be binding upon the City and the responsible party for purposes of calculating the Park Development Fee.

All appraisal costs as may be required pursuant to this section shall be paid by the responsible party. Prior to selection of a qualified appraiser or

appraisers as bove, the responsible party shall deposit with the City of Signal Hill funds in such amunt as the Directo fo Planning estimates will be necessary to pay for services of such appraiser or appraisers. The Director of Planning shall thereafter arrange for and procure the services of appraiser or appraisers as required herein. Any portion of the funds not used for appraisal services will be refunded. Any portion of the funds not used for appraisal services will be refunded. Whenever such deposit is insufficient to cover the cost of such services, the responsible party shall reimburse the City for the difference.

B. Exemptions. The above fee shall not apply to new dwelling units which are sold or leased to low and very low income persons and which are sold or leased at rates affordable to very low and low income persons. Such sale prices or lease rates must be guaranteed to remain affordable to low and very low income persons for a period of not less than ten years. An agreement approved by the City Attorney guaranteeing the affordability of the units shall be executed between the City and the responsible party and shall be recorded against the property in the Office of the County Recorder.

20.90.050 Use of Fees. The use of Park Development Fees shall comply with the following:

A. The sums raised by payment of this fee shall be placed in a separate and special account and such sum, together with any interest earned, shall be used for the acquisition, expansion or improvement of City parks, including the purchase of play equipment and materials for use within the parks.

B. The City Council shall make findings once each fiscal year at a public hearing as to any portion of any unexpended or uncommitted Park Development Fee remaining in the Park Development Fees account five or more years after deposit of such fee, and as to the development in conjunction with which each such fee was collected, the continuing need for such funds, and the relationships between the development projects upon which the fee was charged and such continuing need.

C. The City Council shall refund to the then-current owner or owners of record of the development project or projects, in proportion to their interests as they appear in the instruments of conveyance by which each acquired title, the unexpended or uncommitted portion of the fee and any interest accrued thereon for which the need cannot be demonstated pursuant to Section B, above. The City Council may refund the unexpended or uncommitted revenues by direct payment, by providing a temporary suspension of other fees then applicable to the development project, or by any other means consistent with the intent of this subsection. The determination by the City Council of the means by which the revenues are to be refunded is a legislative act.

D. If the administrative costs of refunding unexpended or uncommitted revenues exceed the amount to be refunded, the local agency, after a public hearing, notice of which has been published ten days prior to the hearing and posted in three prominent places within the area of the development project, may determine that the revenues shall be allocated for some other purpose for which park development fees are collected, so long as the expenditure will still benefit the project on which the fee was originally imposed.

20.90.060 Severability. If any section, subsection, sentence, clause, or phrase of this ordinance is for any reason held to be invalid or unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance, except that if any such section, subsection, sentence, clause, or phrase is held invalid or unconstitutional so as to disallow assessment and collection of fees hereunder, then park and recreation dedications and fees shall thereafter be collected in the manner and in amounts as setforth in Subsection 18.32.120 herein.

PASSED, APPROVED, AND ADOPTED, this _____ day of December, 1989.

GERARD GOEDHART
MAYOR
CITY OF SIGNAL HILL

ATTEST:

_____
KRIS C. BEARD
CITY CLERK

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES)ss.
CITY OF SIGNAL HILL)

I, KRIS C. BEARD, City Clerk of the City of Signal Hill, California, hereby certify that Ordinance No. 89-11-1043 was adopted by the City Council of the City of Signal Hill at a regular meeting held on the _____ day of December, 1989, and that the same was adopted by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

_____
KRIS C. BEARD
CITY CLERK
CITY OF SIGNAL HILL

RESPONSE TO COMMENTS
ADDENDUM TO DRAFT EIR
GENERAL PLAN UPDATE

Prepared for:

City of Signal Hill
Community Development Department
2175 Cherry Avenue
Signal Hill, California 90806

Contact: Christine Shingleton,
Community Development Director

Prepared by:

Michael Brandman Associates, Inc.
3140 Red Hill Avenue, Suite 200
Costa Mesa, California 92626
(714) 641-8042

Contact: Frank B. Wein, AICP
Director of Planning Services

March 1986

The Draft Environmental Impact Report (DEIR) for the proposed update of the Signal Hill General Plan was circulated for public review and comment for 30 days (February 12, 1986 through March 12, 1986). The DEIR was sent to the following:

- State of California, Office of Planning and Research (State Clearinghouse)
- South Coast Air Quality Management District
- City of Long Beach
- General Telephone Company
- Unified School District
- Southern California Edison Company
- County of Los Angeles, Department of Regional Planning; Fire Department; Sanitation District
- Southern California Association of Governments
- Long Beach Gas Company

In addition, notice of the availability of the DEIR was published in the Signal Hill Star-Tribune to solicit comments from the public. Copies of the DEIR with the draft Signal Hill General Plan were made available in the offices of the Community Development Department and the Signal Hill Public Library.

Two public workshops were conducted by the city to solicit comments on the DEIR and the draft General Plan. The Planning Commission, also, conducted a public hearing on the DEIR and the draft General Plan. The workshops (February 20, 1986 and February 27, 1986) and the commission's public hearing (March 6, 1986) resulted in additional comments pertaining to the DEIR.

On the following pages are copies of all written responses received by the City of Signal Hill pertaining to the DEIR Responses to each comment following the written letter. Comments relative to the DEIR raised at the two public workshops and the Planning Commission's public hearing are summarized following the written comments.

LAW OFFICES
PARKER AND COVERT
A PARTNERSHIP OF PROFESSIONAL CORPORATIONS
1901 EAST FOURTH STREET · SUITE 312
SANTA ANA, CALIFORNIA 92705
(714) 973-2137

CLAYTON H. PARKER
SPENCER E. COVERT, JR.
MARGARET A. CHIDESTER
CHARLES S. SCOLASTICO
LINNEA LONG
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VERNA P. BROMLEY
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JOHN F. WILSON
L. THOMAS KRAHELSKI

SAN BERNARDINO OFFICE
330 NORTH D STREET · SUITE 340
SAN BERNARDINO, CALIFORNIA 92401
(714) 884-3314

REF. OUR FILE

March 6, 1986

Planning Commission
City of Signal Hill
2175 Cherry Avenue
Signal Hill, CA 90806

Re: Draft City General Plan and
Draft Environmental Impact Report

Dear Members of the Planning Commission:

The Long Beach Unified School District has reviewed the Draft General Plan and Draft EIR relating to the impact that the general plan will have on the District. Pages 34-38 discuss the impact on school enrollment and possible mitigation measures.

As a preliminary item, neither the Draft General Plan nor the Draft EIR discuss the impact on school enrollment from increased commercial and business growth. The District has maintained that commercial growth will impact the District. However, the EIR fails to analyze this effect. 1-1 1-2

Although the Draft General Plan and Draft EIR do not specifically set forth the nexus between commercial development and impact upon student enrollment, such nexus is implied. In particular, the Draft General Plan at Page Int. 2 indicates the City of Signal Hill is a prime location for commercial, industrial and residential construction in midst of a mostly developed south bay area. Clearly, the implication is that increased development will work in coordination with and will prompt construction of residential units which will bring households with school-age children to the area.

In addition, on Page L-9 of the Draft General Plan, the plan states:

> "While the oil industry has historically provided a majority of the city's employment, a growing variety of wholesale sales

> and service, manufacturers and processors, and professional and semi-professional related industries can be found in the city as a result of new industrial development."

The plan, also on this page, indicates the increase in reported businesses in the City of Signal Hill from 271 businesses in 1973 to 836 businesses in 1984 with a total employment of 7,588 persons.

On Page HE18, the plan indicates:

> "Employment factors strongly influence the housing market in terms of local and regional housing demands in distribution. . . An adequate supply in balance of jobs accessible to residences, and lower the cost of housing, create shorter commutes. . . For these reasons, apparent and expected increases in manufacturing and commercial development in Signal Hill, as well as city's close proximity to major employment centers such as Long Beach and Downtown Los Angeles, is an extremely positive attribute."

Moreover, the plan states:

> ". . . the city's civilian labor force is expected to increase to approximately 4,195 by 1989 . . ."

Clearly, the General Plan's contemplation of increased commercial growth with an accompanying increase in the labor force directly establishes, at least to some degree, that employees with families with school-age children will be moving into the area as a result of this growth. Consequently, the EIR should take into consideration this impact in order to provide sufficient information to the decision makers regarding the impact that commercial growth according to the new general plan will have on school enrollment.

Page 36 of the Draft EIR discusses the student generation factor. The Draft EIR indicates that the student generation factor for single-family residences is .15 students per unit and for multiple-family units, .246 students per unit. These

1-3

These generation factors appear to be astonishingly lower than the District's average student generation factor of .34 students per dwelling unit. Although it is recognized that the student generation factor computed by the City of Signal Hill is predicated upon the demographics of the City of Signal Hill alone, there is still a question as to why these student generation factors differ so significantly from the average. Unfortunately, the Draft EIR does not set forth the exact calculations which derive the City's student generation factor and therefore, the District can not examine the City's process and reasoning. Of particular concern is whether the "unusually high vacancy rate" was taken into consideration when deriving the student generation factor. Page HE13 of the Draft General Plan discusses in some detail the anomality of Signal Hill's vacancy rate. Said section indicates that the City's vacancy rate was approximately 8% in 1984 with the 1980 census showing an astounding 14.1% vacancy in condominium units. Clearly, the student generation factor would be artificially low if the housing unit component of the student generation factor formula included an abnormal percentage of vacant housing units. Accordingly, the EIR should be revised to set forth the formula used by the City in determining the student generation factor and should set forth the number of dwelling units used to derive this figure; indicating the percent of vacant units which were factored into the calculation. Obviously, an unusually high vacancy rate will tend to dilute the student generation factor and not provide the decision makers with accurate information of the impact that future projects will have on the District.

Page 38 of the Draft EIR discusses mitigation measures for the impact of the plan upon District. Said section indicates that: 1-4

> "Because school enrollment has fluctuated dramatically over the last ten years, construction of temporary classrooms to alleviate any overcrowded conditions would seem to be the best mechanism to mitigate potential impacts of the proposed general plan." (Emphasis added.)

Please be advised that the District has always maintained that the current increase in student population will require the construction of permanent facilities; temporary facilities are not considered adequate mitigation. The above statement

that "school enrollment has fluctuated dramatically over the last ten years" is not accurate. That is, school enrollment has not fluctuated at all but has followed a trend which up until 5 years ago was decreasing with respect to student enrollment. However, approximately 5 years ago, a low point in student enrollment occurred and since then the District has been experiencing consistent and increased student enrollment. Moreover, according to the birth rate data promulgated by the County of Los Angeles, the District estimates that enrollment will increase by 1500 to 2500 students per year for at least the next 5 years. Thus, the District's enrollment has been consistently increasing over the last 5 years and will consistently increase in the next 5 years. Consequently, temporary facilities are not appropriate to mitigate the permanent impact that the general plan will have on District. (The City of Signal Hill's trends with respect to student enrollment and increased student birth rates are similar to the District-wide figures.)

In addition, the general plan itself contemplates that: (1) population of the City will increase; (2) student enrollment will increase; (3) commercial growth will increase; and (4) the labor force will increase. Therefore, there does not appear to be any reason to believe that the student enrollment in District's schools will do anything but increase.

Please be advised that the cost of providing permanent facilities is much more expensive than the cost of providing temporary facilities. For instance, it is estimated that the cost per student for providing permanent facilities, exclusive of land cost, is $5500 for elementary, $7500 for junior high and $8500 for high school. Hence, the EIR should discuss the increased impact on the District with respect to providing permanent facilities as opposed to temporary facilities. 1-5

Finally, the Draft EIR indicates on Page 38 that there are a number of mitigation measures available to the District that could assist them in constructing or reconstructing facilities or temporary classrooms. Although there may exist alternative measures for constructing school facilities, it must be understood that most of the items listed are not feasible. First, school financing through programs administered by the State Board of Allocation can not be relied upon. It is common knowledge within the industry that the State of California does not have the money to provide 1-6

the school facilities required by all of the districts in the state. Moreover, requests for state aid by the Los Angeles City Unified School District alone could completely consume all of the money available from the State. Thus, reliance upon State money to provide necessary school facilities is neither feasible nor prudent.

The use of state lottery money is designated for instructional uses only. Purchase of the land and construction of school facilities is not a proper use of this money. Moreover, it is not likely that monies from the general fund which were originally slated for other purposes can be freed up through the lottery money to be used for capital outlay purposes.

Finally, imposition of a special taxing district pursuant to Mello-Roos Community Facilities District is an appropriate method to finance school facilities, however, it must be remembered that such a community facilities district would require a 2/3's vote of the landowners within the District.

Very truly yours,

Charles S. Scolastico
for Parker and Covert

CSS:ijd0432

Response to Comments from Long Beach Unified School District (Parker and Covert, Attorneys)

Response to Comment 1-1: City of Signal Hill staff has prepared a detailed analysis of the potential impacts on the school district that may result from implementation of the draft General Plan in Table 10 of the EIR (p.37) identifies the impact on the Long Beach Unified School District in terms of the absolute number of students.

Response to Comment 1-2: The General Plan Land Use and Housing Elements are internally consistent. Specifically, the future buildout of residential and non-residential land (i.e., for commercial uses) identified in the Land Use Element is incorporated in the Housing Element to estimate the future population of the city. That is, the potential future commercial growth in the city the General Plan would accommodate is reflected in the potential housing and population of the city. The city acknowledges that commercial growth will affect population growth; however, the relationship between these two facets is reflected in the General Plan and therefore reflected in the analysis in the DEIR.

Response to Comment 1-3: The student generation factor used in the General Plan and, therefore, the DEIR is derived from city staff analysis of the city's past and present demographic characteristics (see also Tables 1-1A to 1-1C).

Response to Comment 1-4: The City of Signal Hill can only recommend measures to mitigate enrollment school impacts; the selection and implementation of specific programs are the responsibility of the LBUSD. The General Plan and, therefore, the DEIR identify those programs the city could participate in (e.g., development fees). The city will, to the extent feasible, participate in other programs to mitigate enrollment impacts as they are presented to the city.

Response to Comment 1-5: See Tables 1-1A to 1-1C for city staff analysis of the cost per standard and per unit of temporary facilities to the LBUSD related to student enrollment projections. As noted in the EIR, the district's existing problems related to capacity of classrooms will not be substantially changed by implementation of the General Plan. Specifically, Signal Hill will represent less than 10 percent of the districts total capacity at buildout (see p. 37).

Response to Comment 1-6: Comment acknowledged; no response necessary. However, LBUSD does have several financing optios (e.g. Mello-Ros Community Facilities Act). Therefore, it would be an undue burden on development within the City of Signal Hill, significantly increasing the cost of new housing, to impose fees to construct permanent facilities. Moreover, the LBUSD has entered into an agreement with the Los Alamitos Unified School District to alleviate existing over-crowded conditions.

CITY STAFF ANALYSIS OF THE "PER STUDENT" AND "PER UNIT" COSTS FOR THE CITY OF SIGNAL HILL

	TYPE OF DWELLING UNIT	
	SINGLE FAMILY	MULTI-FAMILY
[1] APPROXIMATE COST PER STUDENT	$2,870	$2,870
[2] AVERAGE NUMBER OF STUDENTS GENERATED PER UNIT		
Elementary	.085	.147
Junior High	.033	.052
High School	.032	.047
TOTAL	.15	.246
[3] COST PER UNIT - BASED ON AVERAGE NUMBER OF STUDENTS GENERATED PER UNIT		
Elementary	$244	$422
Junior High	$95	$149
High School	$92	$135
TOTAL	$431	$706

1 "Cost Per Student" is determined by dividing "Total Classroom Cost" by "Students Generated Per Classroom" (students per classroom is determined by Long Beach Unified School District to be 30, rounded off).

2 "Average Number of Students Generated Per Unit" is determined by totalling enrollment of Signal Hill students in Long Beach Unified Schools and dividing it by the appropriate totals in the City Dwelling Units, as follows:
Single Family -- 1,031
Multiple Family -- 2,360

3 "Cost Per Unit" is determined by multiplying "Average Number of Stuoents Generated in each category by "Cost Per Student", rounded off.

ESTIMATED COSTS OF PROVIDING INTERIM CLASSROOM FACILITIES

REQUIREMENTS	COST[1]
Base Building	$41,600.00
Utility Services	$9,780.00
Pad Preparation	$3,500.00
Legally Required Expert Services	$15,417.70
Communications	$2,000.00
Restrooms (2)	$13,889.00
TOTAL BASIC CLASSROOM[2]	$86,186.70

1 Estimates provided by Long Beach Unified School District.

2 Total basic classroom cost does not include cost of furnishings and equipment, estimated at $6,000.00, which has been deducted by City Staff.

BREAKDOWN OF STUDENTS LIVING IN SIGNAL HILL ATTENDING LONG BEACH UNIFIED SCHOOLS AND TYPE OF HOUSING THEY RESIDE IN

	Single Family	Two Family [2]	Multiple Family	Group Quarters [2]	Total
Elementary	88	94	253	2	437
Junior High	35	37	86	2	160
High School	34	32	80	2	148
TOTAL	157	163	419	6	745 [1]

1 The Long Beach Unified School District listed 777 students residing in the City of Signal Hill. Staff determined that 24 of those students do not reside in Signal Hill. During plotting of addresses on map, eight students were not accounted for.

2 Consicered a multiple family occupancy.

tobin investment corporation
16531 bolsa chica street, suite 301
huntington beach, california 92649
(714) 840-3581

March 5, 1986

HAND DELIVERED

Christine A. Shingleton, Director
Planning & Community Development
City of Signal Hill
2175 Cherry Avenue
Signal Hill, CA 90806

Re: Proposed General Plan for the City of Signal Hill 2-1

Dear Ms. Shingleton:

I would like to submit to the Planning Commission and City Counsel of the City of Signal Hill the following discussion of the Proposed General Plan and application for a minor adjustment to one of the boundary lines included therein. I respectfully submit this proposal as the General Partner of TTB limited partnership, a California limited partnership ("TTB") which owns three lots on the northern side of Nineteenth Street just east of Temple Avenue.

The Proposed General Plan: The desity requirements under the previous general plan provided that up to three units could be constructed on each of TTB's lots. The Proposed General Plan will reduce the allowable density such that, at best, TTB would be able to construct only two units per lot.

Background: TTB acquired the three lots for $250,000 in November, 1979, at which time the density limitations would allow four units per lot. TTB secured building permits thereafter; however, as a result of the unstable and volitile interest rate environment during the early 1980's, TTB held off on developing the lots to wait for a healthier economic and housing environment. In 1983, the lots were downzoned so that only three units per lot could be constructed.

In 1984, I initiated new planning and design efforts to build out the three lots with three units per lot for a total of nine condominium units. Application for the

necessary building permits was made in early 1985. In addition I arranged for $612,260 of private financing to construct the nine units. These funds were funded and available in March, 1985.

In April, 1985, the City of Signal Hill imposed a building moratorium while the City drafted and prepared the Proposed General Plan. As a result of the moratorium, TTB had to scuttle its efforts to build out the lots and await the results of the new Proposed General Plan.

In the process of the two instances of downzoning TTB's property, TTB has incurred more than $50,000 of expenses relating to holding costs, taxes, and now useless planning and design costs. Further, an independent real estate appraiser has informed me that the three lots are now worth no more than $150,000, or approximately $100,000 less than when TTB acquired the lots. He has further indicated that the loss in value is not the result of a depressed market, but rather the result of the downzoning.

Description of the Immediate Vicinity to TTB's Lots

TTB's three lots are located along the north side of Nineteenth Street. I believe there are a total of eight vacant lots roughly 50' by 150' in dimension along this stretch of Nineteenth Street (including TTB's three lots).

The land located east of the lots is occupied by an oil pumping rig and its related facilities. To the west of the site is a commercial office building.

Across the street and to the southeast from the site is an industrial/office building. Across the street to the southwest is a high density housing project.

To the north of the lots, the land is vacant, although Norton Drive is dedicated to the City and forms the immediate northerly boundary to the TTB lots. In fact, one of the requirements of TTB's previous applications for building permits was that TTB put in a substantial percentage of Norton Drive at its own cost.

The vacant land to the north of the TTB lots has also had its density reduced to low density residential uses.

Proposed Adjustment to the General Plan

I propose that the eight lots located on the north side of Nineteenth Street, including TTB's three lots be included in a medium or high density section of the Proposed General Plan, such that 3 units could be con-

structed on each lot. Without arguing the relative merits of downzoning, I believe the following rationale for such an adjustment is compelling:

1. Conformity to Other Uses: Clearly, the lots are surrounded on three of four sides by commercial, industrial, or high density residential uses. Further, Norton Drive will act as a natural boundary between the lots and the vacant expanse to the north. As a practical matter, therefore, the character of these eight lots is governed by the uses to which it is adjacent on its east, west, and southern boundaries; those are: high density residential, commercial, or industrial uses.

2. Economic Feasibility: The economic feasibility of constructing lower density units in a situation such as this where the lots are effectively surrounded by inconsistent uses is poor at best. The lots most logically should be used as locations for high density residential uses (i.e. affordable housing or apartment units) or commercial uses.

3. Inability to Alter Site Characteristics: Certainly some analogous arguments to these might be raised for other larger sites. The TTB situation is distinct, however, because of the small amount of land which TTB owns. There is no economically practical method by which we could "design around" the adjacent and all too dominating uses. If TTB owned a large site of several acres with a more square configuration, we might be able to design a project so that the adjacent uses did not interfere with or diminish the use of our site. We do not, however, have that luxury as the eight lots each front on Nineteenth Street and are elongated rectangular shapes of 50' by 150'. Thus, we are stuck with what we have.

Conclusion

In conclusion, we respectfully request your consideration of our proposal. The impact of the downzoning creates a severe financial hardship on TTB. We believe that this hardship can be alleviated without any impact on the purpose and intent of the Proposed General Plan by the adoption of this proposed minor adjustment to the Proposed General Plan.

We request and appreciate your consideration of this proposal.

Very truly yours,

Hal Tobin
President

HET:js
c.c. TTB Limited Partners

Response to Comments from Tobin Investment Corporation

No response necessary; all comments pertain to the General Plan and not to the DEIR.

LLEWELLYN BIXBY, JR., PRESIDENT
MATTHEW C. SIMPSON, VICE PRESIDENT
A. MAXSON SMITH, VICE PRESIDENT
JEAN BIXBY SMITH, VICE PRESIDENT
DARRELL NEIGHBORS, SEC.-TREAS.
JOSEPH R. SMITH, ASSIST. SEC.-TREAS.

ALAMITOS LAND COMPANY
444 WEST OCEAN BOULEVARD, SUITE 1704
P. O. BOX 2488, LONG BEACH, CA 90801
TELEPHONE (213) 437-7447

March 6, 1986

Honorable Planning Commission
City of Signal Hill

Re: Recently Completed General Plan and Environmental Impact Report for the City of Signal Hill

Dear Members of the Planning Commission:

We first began a master plan for our properties on the northeast flank of Signal Hill in 1978. At that time, we engaged the planning firm of The SWA Group to develop and process a master plan and environmental impact report (EIR) for the entire 98 acres. Because the majority of our land lies within the city limits of Long Beach, it was mutually agreed that the City of Long Beach would be the lead agency to accomplish the processing of our EIR. During this time, the City of Signal Hill began their own general plan and EIR process. We were able to get approval of the EIR for the whole of our property and the needed general plan and zoning approvals for the portions within the City of Long Beach. General plan and zoning amendments in the City of Signal Hill, however, have been held in abeyance pending completion of the above referenced report. 3-

We have completed our review of the subject report and have noted with deep concern the imposition of a residential designation on certain parcels of our land which we have projected as a business park use. Indeed, one such parcel lying southerly of Hill Street and west of Obispo Avenue, and which is bisected by the city limits line has already been designated for use in the City of Long Beach as business park and is reflected as such in the EIR recently approved on behalf of both cities.

We most recently voiced our concern in a letter to Christine Shingleton in November, 1985. We were, at that time, still under the impression that the residential designation for our land within your study sub-area 1 and 2 was being shown as such because it was an existing condition which would be changed to a business park designation upon submittal of our specific plan for these areas. (See attached map) This aforementioned specific plan has been awaiting review by the City of Signal Hill since February, 1985.

We have, since the beginning preparations of a specific plan for our land in 1979, been assured that our business park designation for these parcels (except for the residential on the upper slopes) was acceptable to the City of Signal Hill. Our records reveal that we have had over

15 separate meetings with your planning staff and at no time were we led to believe that the business park use was unacceptable or that the City wanted the property to develop as residential. Another grave concern is the requirement that 30% of the dwellings be single family homes. This requirement has never been discussed with us and we became aware of it only by reading the subject report.

Initially, the parcels in question were zoned residential at 21-24 units per acre. We were downzoned early on to 15-20 units per acre. Subsequently, we have been further downzoned to 5-10 units per acre.

Now we find that not only has our density for these parcels been more than halved, but our business park designation has been totally eliminated from consideration. Why then have we spent so much time, effort and in excess of $250,000 to master plan our property only to have our property remain residentially zoned with a subsequent drop in dwelling units per acre. With the exception of parcel L, there was no expressed disagreement to our plans for developing parcels D through G into a business park use. Indeed, your proposed zoning renders much of the master plan and EIR invalid, as all the data used to determine traffic impacts, water and sewer requirements and other environmental impacts was developed assuming a business park designation. Except for the downzoning, our parcels in your study area have been left precisely as they were prior to the beginning of our master plan and EIR in 1978. Your efforts have paid no attention to the planning that has been accomplished easterly of Obispo Avenue in the City of Long Beach. Moreover, our plans for our property within your city limits have been completely ignored. Every effort, every dollar, every meeting has been completely negated by your general plan.

If the City's desire is to maintain a minimum projected population density by keeping these parcels totally residential, why not adopt our plan of utilizing the mid and upper slopes for residential applications at whatever population density would have been yielded by your proposed general plan. The flatter areas could then be developed into our proposed business park use, thereby yielding sales tax revenues, etc., that would not accrue to the City through residential development.

It really makes no sense to us that the flatter areas of these parcels would be encouraged into residential development, especially single family homes. We do not believe anyone would want to live directly across the street from the Edgington Oil Company tank farm or all the other businesses that will be developed on the east side of Obispo Avenue.

We do believe, however, that a private street with heavy landscaping could be designed to separate the upper and lower slopes and provide an effective buffer between business park and residential areas as was proposed in our specific plan.

We strongly urge your commission not to abandon all of our mutual efforts and to consider our request for a general plan amendment to allow our parcels to be zoned according to our already submitted specific plan.

Very truly yours,

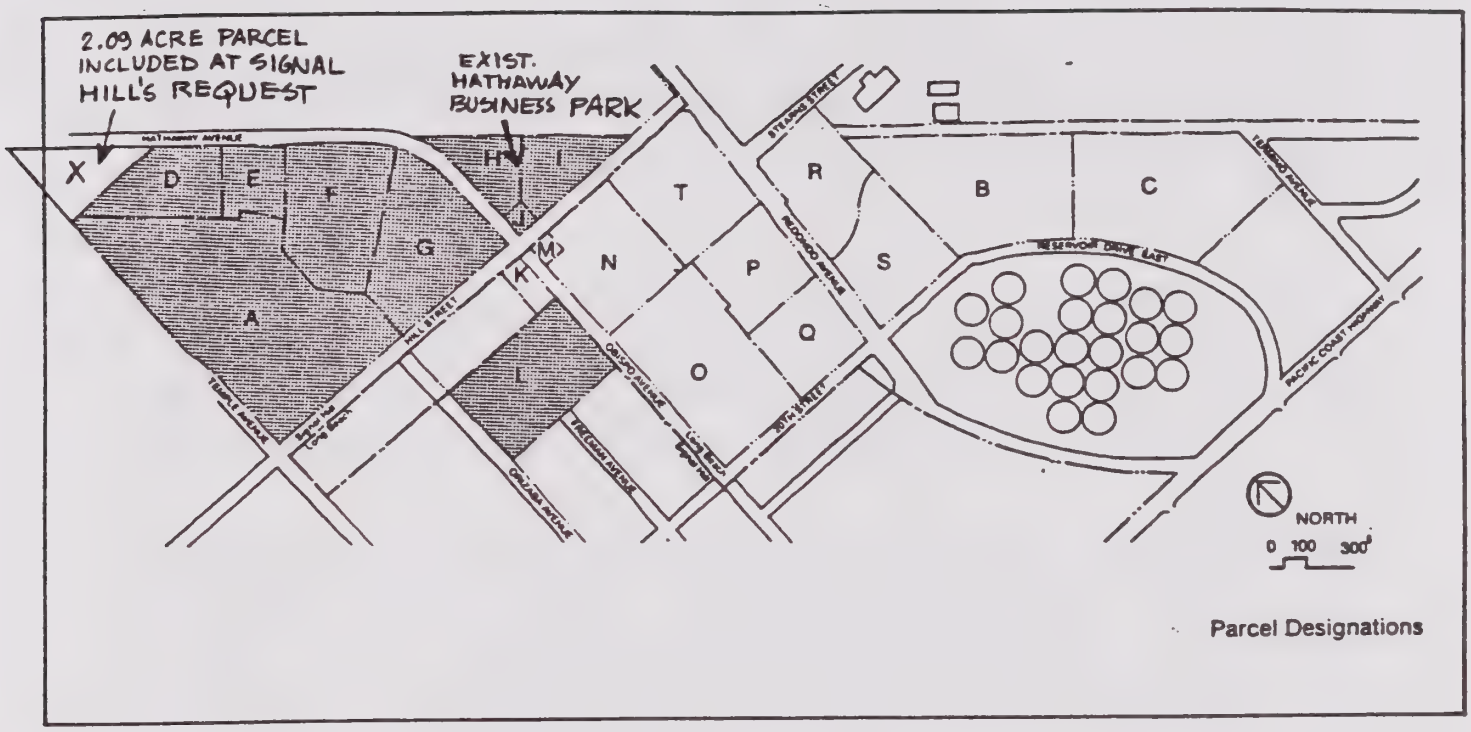
ALAMITOS LAND COMPANY

By Jean B. Smith.
Jean Bixby Smith
Vice President

JBS:l

Enclosure

CONCEPTUAL PARCEL PLAN



Response to Comments From the Alamitos Land Company

Response to Comment 3-1: In 1982, the Alamitos Land Company Draft Specific Plan was submitted to Signal Hill. The document, which was subsequently approved by Long Beach with only minor revisions, was prepared without discretionary approvals from the City of Signal Hill.

Staff review of the specific plan found it to be a "bare bones" plan containing minimal technical detail (i.e., infrastructure, development constraints analysis). The development standards were less than what is contained in the Signal Hill zoning ordinance; furthers the maps were of poor quality and tables incomplete.

Alamitos Land Company was advised about the city's concerns but rather than revise the specific plan, Alamitos Land Company decided to withdraw the Signal Hill portion of the plan. Staff did comment on the draft EIR on the Alamitos Land Company Specific Plan but the comments were largely ignored by Long Beach when the EIR was subsequently certified in 1983.

SIGNAL HILL COMPANY

RECEIVED MAR 10 1986

March 5, 1986

City Council
Planning Commission
City of Signal Hill
2715 Cherry Avenue
Signal Hill, California 90806

Gentlemen:

After having reviewed the draft of the proposed General Plan for the City of Signal Hill, we offer the following comments:

1. The greatest and most easily recognizable impact of the proposed General Plan is the drastic reduction in housing density in areas of the City, primarily the large undeveloped acreage on or near the Hill. This includes reductions of nearly 75% on the approximately 35 acres on the southwest flank of the Hill (lands in Residential Category 1.1, Very Low Residential Density), and reductions approaching 50% on the northeast, east, and southwest flanks of the Hill, as well as other large areas in the flat lands to the east and south of the Hill (lands in Residential Category 1.2, Low Residential Density).

The Environmental Impact Report comments, "The proposed Plan identifies land use distributions similar to those existing and to those under the adopted General Plan."[1] In our experience, land uses at such divergent densities are similar only in the fact that both are residential uses; we do not agree that these uses are, in actuality, substantially similar. The Land Use Element of the proposed Plan reads, "It is anticipated...that at least some exclusively single family areas within this category [Low Medium Density Residential] would remain based on existing development patterns."[2] However, nothing is stated which ensures that this will happen, that land use densities on undeveloped property within these areas will be consistent with surrounding properties. Understanding the City Council's desire to restrict future population and to increase the amount of single family housing within the City, we question why areas of already existing single family use are not included in the Very Low and Low Residential Density categories, rather than only large undeveloped acreage.

4-1

The stated goal of Policy 3.14 of the Land Use Element is to "preserve and enhance the City's special residential character and 'small town' atmosphere by encouraging low intensity residential development."[3] However, it seems to us that the Plan simply "mandates" rather

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"encourages" this type of development. The City has targeted hillside properties for Very Low and Low Densities, properties that bear higher-than-normal development costs due to several factors: topographic constraints; oil operation mitigation, i.e., removal and/or relocation of pipelines and wells, and buffering of oil operations; view protection, both public and private; and the absence of required infrastructure. Nowhere in the Plan does the City provide any means to "encourage" this type of development, but rather discourages it by statements such as, "Development of Very Low Density Areas will require developer installation of most required public infrastructure and services."[4]

The EIR recognizes that these reductions in densities will increase housing costs, an impact it acknowledges is significant, as evidenced by the statement, "Although a variety of additional policies and programs are included in the Housing Element to mitigate impacts on housing costs, impacts may not be reduced below an acceptable level."[5] The EIR suggests mitigation measures, including density bonuses for projects in which affordable housing will be offered, and the exemption of dedications by the builder (we assume this refers to parkland dedications). If the City were to allow reasonable densities rather than those proposed, development could occur and parklands could still be provided. However, to provide increased density to mitigate the adverse effects of decreased density seems to us to be ludicrous, as does the exemption of dedicated parklands to mitigate one problem when that very dedication mitigates another problem. Yet a measure that could reduce the adverse impacts, the City's participation in installation of public infrastructure and services rather than requiring developer installation, is not included. We do not believe this EIR fully outlines appropriate mitigation measures, nor do we believe it fully addresses the impacts the reductions will have on the land owners, potential home buyers, or the community as a whole.

Although we understand feasibility studies and economic analyses are not required by CEQA for the planning process, property owners find them essential in determining the actual proper use for their properties. We believe that they are as vitally important to the future well-being of the City and the community as they are to the land owner or developer. In 1984 we authorized the consulting firm of Tarantello and Company to conduct such an analysis of the Signal Hill area (a copy of their report, "An Evaluation of the Feasibility of Various Residential Development Densities for the Signal Hill Study Area" dated March 15, 1984, is included herein). The conclusion reached by this report is that such large reductions in densities will lead to products which must be priced over the market and will have such slow absorption that they will greatly increase the risk to the developer,

reduce the overall profitability of the project, and possibly discourage any development of these areas. They comment, "Because supply does not create its own demand, the housing stock must reflect...both the housing needs, and most importantly, the price range affordable by the market place."[6] That price range, according to the report, is "...well below $152,000 in order to achieve a reasonable product absorption."[7]

Pages 14 through 16 of the report discuss the per unit raw land cost and its relation to the ultimate sales price per unit, both at current densities and at a reduced density of seven units per acre. Tarantello uses as an example a 9.44 acre site on the southwest flank of the Hill. The value of this site was greatly discounted due to the severe slopes and the large undevelopable areas; thus, the appraised value is only $4.50 per square foot. However, even at this low value, you can see that the finished price that would have to be achieved for a basic, "no-frills" unit at a density of seven units per acre is $190,000. Using this formula, five units per acre (the density proposed in the General Plan) would yield a raw lot cost of $39,894, and a finished unit price of $265,960, over $100,000 more than the market will bear. To quote: "Such pricing structures would result in extremely long absorption periods. Long absorption periods increase the risk associated with development and often result in an unprofitable venture. Poorly performing residential projects are a bad reflection on [the] entire community and could inhibit further capital investment into the area."[8] The City currently has such an example of a "poorly performing project" directly across from City Hall.

The Tarantello report concludes with a discussion of other economic impacts as a result of a decreased number of households in the City, such as a decrease in savings potential to be invested in local depositories, decrease in additions to the local labor pool, and decrease in yearly retail sales. In fact, the report questions whether "...household growth limitations might indirectly lead to...a reduction in the support for commercial development."[9] Keeping in mind the City's desire that the Town Center project be developed, we believe this is a vitally important aspect to consider.

The EIR states, "Approval of the proposed General Plan will affect population housing and economic growth in the City of Signal Hill. The project will foster population, housing and economic growth directly and may indirectly create jobs in construction and service and retail and office jobs."[10] We think not; we believe the major feature of the General Plan, the extreme reduction of densities to a degree that makes projects unfeasible, will have exactly the opposite effect and

will inhibit the vital economic growth of the community. It will reduce the tax base which supports such items as future infrastructure replacement or repairs, i.e. storm drains and water systems, as well as public services. For this reason, we have before and we are once again requesting that an economic/feasibility analysis be incorporated as a part of the EIR to the proposed General Plan.

2. We do not understand the difference between the No Project Alternative (Using the current General Plan) and the Current Zoning Alternative as mentioned in the EIR. Under the Current Zoning Alternative, the EIR states, "Under this alternative, the City would proceed to be developed consistent with current residential zoning densities that are already lower than the 1974 General Plan."[11] Does this mean that density revisions that have occurred under the zoning laws are inconsistent with the existing General Plan, and therefore, under the No Project Alternative, those density revisions would be negated? 4-2

3. Within the Land Use Element, the goal of Policy 1.13 is to "Provide incentives to encourage lot consolidations and large parcel land assemblage to provide expanded opportunities for coordinated development and redevelopment."[12] In addition, the Implementation Program provides for "Provision of incentives for lot consolidation to encourage well designed projects."[13] However, most of the large undeveloped parcels not requiring assemblage and therefore already allowing for well designed projects, are in those areas suffering drastically reduced densities under the proposed Plan, as are most of the small undeveloped parcels which would most benefit by lot consolidation. How does the City intend, then, to encourage consolidation? No measures to accomplish this are outlined, or even inferred, in the Plan.

4. The Land Use Element Implementation Program included several items requiring revisions of existing plans or development and adoption of new plans and/or standards. Are these to be developed and adopted with public input and coordination, i.e., public hearings or workshops? What timetable is anticipated, specifically for Items 1.a., b., c., d., e., f., g., h., l., o., p., r., and t.; 7; 16; 22; and 26. How are development projects to be processed prior to implementation of these programs?

5. The Land Use Element of the Plan provides that "Development activity within Major Centralized Extraction Areas should be provided with adequate buffering and screening."[14] A definition of adequate buffering is requested. Will this be in accordance with an existing guideline, or will one be adopted? If a new guideline is adopted, will it be done with public input, and again, what timetable is anticipated?

In summary, you have noted an inefficiency in the current General Plan in that it "...no longer reflects the growth pattern of the community."[15] We do not feel that the proposed Plan "reflects" the growth pattern, but rather it attempts to direct it by ignoring the influence of both the economic free market and the natural physical and topographic constraints inherent in the land. The City's experience with highly priced projects which are not salable should have brought about the realization that inflated prices and quality do not necessarily equate. Nor does reduced density ensure quality; it simply ensures high prices.

We have informed you that we are currently in the master planning process of the large, undeveloped land on the Hill, but that we cannot develop at the low densities outlined in the Plan. The response we received was that the City would be willing to hear a General Plan Amendment after the adoption of this Plan. We must question the adequacy of a General Plan which may require immediate amending. Would not a better approach be to either delay approval of this Plan or change the densities in the Land Use Element now, rather than later, to be less restrictive, allowing the Planning Commission and City Council at the zoning or the specific plan/precise plan review process determine the appropriate uses and densities on a site specific basis?

Thank you for your attention to these matters. We look forward to continuing to work with the City to produce a document which will not only serve the needs of the entire community, but which will allow the Council to approve development of those economically feasible, high quality projects that will be of benefit to the City.

Sincerely,

THE SIGNAL HILL COMPANY

Susan M. Bemis
Vice President

cc: Louis Shepard, City Manager
Christine Shingleton, Director of Planning and Community Development
State of California Office of Planning and Research
Byron M. Tarnutzer, Signal Hill Company
Jerrel C. Barto, Signal Hill Company
Craig Barto, Signal Hill Company

FOOTNOTES

1. Draft Environmental Impact Report for the Signal Hill General Plan Update, February 1986, Page 22, last paragraph.

2. Land Use Element of the Signal Hill General Plan, 2/7/86, Page L.52, third paragraph.

3. Ibid., Page L.43, Policy 3.14.

4. Ibid., Page L.50, last paragraph.

5. Draft EIR, Page 26, third paragraph.

6. An Evaluation of the Feasibility of Various Residential Development Densities for the Signal Hill Study Area, March 15, 1984, Page 13, second paragraph.

7. Ibid., Page 13, fourth paragraph.

8. Ibid., Page 17, last paragraph.

9. Ibid, Page 20, second paragraph.

10. Draft EIR, Page 60, first paragraph.

11. Ibid., Page 56, first paragraph.

12. Land Use Element, Page L.38, Policy 1.13.

13. Ibid., Page L.62, Item 1.h.

14. Ibid, Page L.60, General Objectives, Item 3.

15. Draft EIR, Page 53, last paragraph.

Response to Comments From Signal Hill Company

Response to Comment 4-1: Comment acknowledged; no specific response necessary. However, the comment recognizes it is the city's responsibility to prepare and adopt a general plan and land use element. The objective of the city, as envisioned in the general plan, is to increase the city's existing opportunities for housing while balancing future growth with environmental (i.e., traffic, services, safety, noise, air quality, etc.) constraints. The intent of the general plan is to achieve growth in a sensible manner. While the amount of growth may be less than envisioned in the existing general plan, the general plan and DEIR include substantial analysis indicating that growth needs to be limited to reflect environmental constraints.

Response to Comment 4-2: The city's existing zoning has never been brought into full and absolute conformity with the adopted (1974) General Plan. The alternatives do not negate any zone changes that have occurred since 1974; the alternatives are presented to assess the impacts of alternative policies. Zone changes (density revisions) that have occurred since 1974 have been consistent with the general plan.

CITY OF LONG BEACH
DEPARTMENT OF PLANNING & BUILDING
333 WEST OCEAN BLVD. • LONG BEACH, CALIFORNIA 90802
(213) 590-6651

March 12, 1986

Christine A. Shingleton
Director of Planning and Community Development
City of Signal Hill
2175 Cherry Avenue
Signal Hill, CA 90806

Dear Ms. Shingleton:

This is in response to your letter of February 12, 1986, requesting our comments on the Draft Environmental Impact Report on the proposed Signal Hill General Plan revision.

The Cities of Long Beach and Signal Hill share common interests in most subject areas addressed by the DEIR. Two areas, in particular, require careful, on-going coordination: land use, and circulation.

The land use plan depicted in the DEIR includes portions of the City of Long Beach. The municipal boundaries, however, are not clearly delineated, and there is no reference to the Long Beach General Plan as it pertains to these areas. We recommend that the DEIR be revised to clearly designate those areas which fall within the jurisdiction of Long Beach, and to specify the Long Beach plan for use of these areas. 5-1

The section on transportation and circulation does not provide sufficient information for the reader to fully understand the proposed mitigation measures and the extent of their impact on the identified problems. It would be easier for the reader if the DEIR included a summary of the implementation program in the Circulation and Infrastructure Element, rather than merely referencing them on page 31. We recommend that the DEIR be revised to include a summary of the implementation program proposed to mitigate negative impacts on transportation and circulation. Furthermore, we recommend that a mitigation measure be added to state that Signal Hill planning and engineering staff will work closely with their counterparts in the City of Long Beach to insure that planning and implementation of transportation improvements will be closely coordinated so as to insure compatibility and continuity between the two cities. 5-2

Thank you for providing us the opportunity to comment on the DEIR.

Sincerely yours,

Robert Paternoster
Director of Planning
and Building

RP/kmb

Response to Comments From City of Long Beach

Response to Comment 5-1: Comment acknowledged; the map on the following page clearly designate municipal boundaries. There are portions within the City of Long Beach that are shown as potential sphere of influence areas on the proposed Signal Hill Land Use Map. These designations may differ from those shown on the adopted Long Beach General Plan. The map shows all other Long Beach designated land uses outside the sphere of influnece boundaries.

Response to Comment 5-2: Comment is acknowledged. The City of Signal Hill agrees that there is a need for close coordination and working relationship between the City of Long Beach and City of Signal Hill Planning and Engineering Departments to insure compatability and continuity between the two cities. The City of Signal Hill staff presently coordinates with their counterparts and will continue to do so.

Telephone conversation with California Air Resources Board (ARB) on March 5, 1980 with Ms. Christine Shingleton.

Comment 6-1: The ARB would encourage the City to include a detailed summary and identification of programs that will reduce vehicle-miles travelled (VMT).

Response to Comment 6-1: The General Plan includes several aspects and implementation programs that wil achieve ARB's objectives to reduce VMT. These include:

A. Mixed Land Uses are recommended in the Land Use Element; this will provide housing opportunities in proximity to employment, recreational, and commercial uses; see page L-65 (program number 24);

B. Transmit services, including work with the Long Beach Transit Company and, Transit Management Programs for major employers (see p. C-51, programs 15, 16, 17 and 18); and

C. Site design, including integrating projects with a greenbelt system (see p. ER-44, programs 4 and 5 and p. ER-45, program 15).

DRAFT FOR DISCUSSION ONLY

GENERALIZED LAND USE PLAN



LEGEND

KEY

1.1	VERY LOW RESIDENTIAL DENSITY	up to 5 d.u./acre
1.2	LOW RESIDENTIAL DENSITY	5-10 d.u./acre
1.3	LOW/MEDIUM RESIDENTIAL DENSITY	10-15 d.u./acre
1.4	MEDIUM RESIDENTIAL DENSITY	15-21 d.u./acre
1.5	HIGH RESIDENTIAL DENSITY	21-30 d.u./acre

2.0 MIXED USE
3.1 TOWN CENTER
3.2 COMMERCIAL GENERAL
3.3 COMMERCIAL OFFICE
3.4 COMMERCIAL INDUSTRIAL
4.1 LIGHT INDUSTRIAL
4.2 GENERAL INDUSTRIAL

PUBLIC/INSTITUTIONAL

- PF PUBLIC FACILITIES
- ▲ POLICE OR FIRE
- S SCHOOLS
- P PARKS
- C CEMETERY
- U UTILITY FACILITIES

SPECIAL STUDY AREA
✱ PRECISE/SPECIFIC PLAN REQUIRED

SCALE
0 400 800 1200 2000

City of Signal Hill

RESPONSES TO MAJOR COMMENTS AND ISSUES

General Plan Workshop III

February 20 1986

SUMMARY RESPONSES TO MAJOR COMMENTS AND ISSUES RAISED ON FEBRUARY 20, 1986 ON THE PROPOSED GENERAL PLAN

1. **Comment:** Councilwoman Jessie Blacksmith asked about the history of non-conforming manufacturing uses in the southwest portion of the City.

   Response: In 1974 the area was zoned industrial. After considerable opposition from residents, the area was zoned back to R-2 in the mid 1970's with the exception of a smaller area along the east side of California and a small area on the west side of Lemon south of Burnett. The proposed General Plan proposes these areas in High Density Residential (21-30 dwelling units/acre) as an incentive to encourage replacement of manufacturing uses.

2. **Comment:** Councilman David Bellis commented that the area in the vicinity of Gaviota and Rose is shown as High Density on the Land Use Plan but the area is congested. He asked about impact on parking.

   Response: Congested conditions are associated with those existing development projects which were built with limited parking and open space. However, over ½ of each block in this area is already developed to densities consistent with the proposed High Density Classification. The remaining portions of the area are generally in substandard condition; so mere rehabitation will not turn these areas around without an incentive. Proposed zoning ordinance amendments which will follow the General Plan will provide development standards to ensure adequate parking, setbacks and open space.

3. **Comment:** Councilman David Bellis asked at what actual dwelling unit density would development occur in the area north of Hill in the vicinity of Rose and Gaviota.

   Response: The actual density of development would vary on a site specific basis. However, it is anticipated that development regulations will be designed to reduce permitted densities on smaller lots.

4. **Comment:** Commissioner Leslie Andersen asked if reason for high density areas was to provide incentives to encourage recycling.

   Response: The proposed densities will encourage some recycling but an additional reason for the designation of high density areas was to reflect the majority of the prevalent development pattern in an area so as to minimize non-conforming situations.

5. **Comment:** Commissioner Leslie Andersen asked what impact Pacific Coast Highway was having on neighborhoods to the north.

   Response: Poor condition of residential area is also impacting marketability of commerical area.

6. **Comment:** Councilman Belis asked about reducing density in the area north of Hill in the vicinity of Rose to Medium Density (15-20 dwellings per acre).

Response: Without looking at the impact comprehensively, such a revision could have a dramatic impact on the City's total population capacity which is already established at approximately 10,700. The proposed land use designation of this area sets the upper limit of permitted density. Zoning ordinance amendments will follow, which will establish densities on a site specific basis.

7. **Comment:** Councilman Bellis asked at what point a density threshold was reached.

Response: Development of 30% of a block is the normal threshold.

8. **Comment:** Commissioner McManus asked how dense the density bonus for provision of low and moderate income housing would be.

Response: Actual density bonus incentives would be subject to City Council approval. The Council would have the option to also provide other incentives of equal financial value.

9. **Comment:** Councilman Bellis asked about the definition of zero lot line attached single family units.

Response: Zero lot line houses are sited on one or more lot line with no yard. In citing units on their lot lines allows larger side yards and are easier to maintain than the narrow side yards that are often associated with conventional single family development.

10. **Comment:** Mr. Haney asked about the definition of cluster development.

Response: Cluster development generally refers to a development pattern in which units are grouped or clustered rather than spread evenly throughout a parcel. The cluster allows protection of important resource features such as steep hillsides, etc.

11. **Comment:** Mr. Haney voiced concern about property being marketable under the proposed General Plan. He feels that with competition from Long Beach it is not realistic to keep densities below surrounding areas in Long Beach.

Response: No response from staff. Councilman Dave ~~and~~ Bellis indicated that single family areas are marketable citing Terrace Drive as an example. They also believe that quality sells.

12. **Comment:** Sara Dodds asked what a standard single family dwelling costs in the City.

Response: Average costs vary depending on size, age and location of a unit, but $200,000 would probably be average.

13. **Comment:** Sara Dodds asked if the proposed General Plan would limit who could live in the City.

Response: No response.

14. **Comment:** Susan Bemis indicated concern with how density classifications were chosen. She questioned why some areas with existing single family units and duplexes were shown at density of 10-15 dwelling units per acre.

Response: Proposed classifications in the case cited are based on the existing development pattern. The narrative contained in the General Plan indicates that the areas mentioned would be limited to single family units and duplexes.

15. **Comment:** Mr. Lee asked if it would be better to have all zone ordinance amendments in hand as well as the General Plan to really see what the impact on property would be.

Response: The General Plan process has been underway for approximately 2 years. An existing moratorium on portions of the "hill" necessitates adoption of the Plan prior to preparation of a revised zoning ordinance.

16. **Comment:** Patricia Moniyhan in the workshop asked about the market for housing in the City.

Response: Past problems in marketing units in the City over the last several years is not an issue exclusive to Signal Hill but was occurring throughout Southern California due to high interest rates. In Signal Hill, prices may have been inflated along with special financing packages which exaggerated the problem.

17. **Comment:** Robert Caso asked if circulation and land use analysis considered intensity of traffic and impact of cumulative development occurring or proposed in Long Beach.

Response: Circulation analysis data anticipates growth in residential and commercial uses. The City has coordinated with Long Beach.

18. **Comment:** Kathleen McGlynn commented that she didn't want anything built on the "Hill" but wanted it left in a natural state.

Response: No response.

19. **Comment:** Craig Barto commented that two years ago they proposed development of 14 dwelling units per acre which could have sold at approximately $150,000 per unit. Now their property is designated at 1-5 dwelling units per acre. They own but wouldn't be able to afford to build at these density ranges. They also can't profitably sell the land with all required dedications for roads, schools and parks. If the City wants to see high quality development, he asked why it was necessary to zone the site at the current density. The market study proposed by them shows a market for only $150,000 units.

Response: The 35 acres proposed in the Very Low Density category is very unique; almost all of the area is in excess of 20% slope with some slopes as high as 85%. The USGS says that development in areas where slopes exceed 25% should be severly limited. The site also contains an earthquake fault.

20. **Comment:** Craig Barto indicateed that slopes were not significant and that it was unfair to restrict it so significantly.

Response: No staff response. Councilman Bellis responded that the issue was not money but the quality of life. Those who want higher densities don't live here. He believes higher prices units will sell.

21. **Comment:** Craig Barto commented that 10 dwellings per acre was not high density.

Response: No staff response. Councilman Bellis responded that acres within the Very Low Density category were steeply sloped. He also indicated that densities recommended were based on citizen input through workshops. If a developer has a project he thinks would meet the Council's goals and objectives, the burden of proof is on the developer.

22. **Comment:** Councilman Goedhardt asked if the Very Low Density category was revised to 5-10 dwelling units/acre, what control over a development plan would the City have.

Response: Just zoning provisions. The 5-10 dwelling unit maximum could also result in 1900 more persons.

23. **Comment:** Donna Lehrer asked about what figure for projecting circulation trips for office growth was used as well as the figures for the City's build-out.

Response: An accepted engineering trip generation factor was applied against year 2000 growth projections by square footage and projected build-out by total land use acreage in each land use category.

24. **Comment:** Marv Haney commented that a recent study says it would take 3 years to absorb all of the office space in the Long Beach area. Most of the space is already absorbed. This could have a tremendous impact on the market for office space in Signal Hill.

Response: The City has projected a healthy growth in office space.

25. **Comment:** Robert Caso asked about the Pacific railroad right-of-way in Long Beach.

Response: While the right-of-way is shown as open space on the Long Beach General Plan, the railroad is abandoning and selling the right-of-way. It is, therefore, very likely that development will be proposed. Since the area is currently blighted, the City will coordinate with Long Beach on any future proposed use of the right-of-way.

26. **Comment:** Robert Caso commented on the widening of Cherry Avenue south of 21st Street and its poor interface with Pacific Coast Highway.

Response: The City has met with Long Beach to design a number of alternatives to resolve this problem. The City has shown the area in the vicinity of Pacific

Coast Highway in its sphere of influence and may wish to approach LAFCO about a possible annexation.

27. **Comment:** Marv Haney stated that he felt 20th or 21st and Alamitos was a natural way to resolve the problem particularly since Long Beach is cleaning up the Alamitos right-of-way to make it a faster street.

Response: The City is still discussing this issue with Long Beach but our policy would be to not encourage the use of the 21st/Alamitos/Cherry route. Orange Avenue is a more acceptable alternative.

28. **Comment:** Sara Dodds asked what was proposed for Temple Avenue north of Pacific Coast Highway.

Response: Temple is identified as a local collector street. Some red curbing to reduce hazardous conditions has been completed. Widening north to 21st is included in the City's capital improvement program.

29. **Comment:** Commissioner Barnes asked about the widths on secondary streets.

Response: Major streets are proposed at 100-110 feet; secondary at 80 feet; secondary modified 70 feet; and local collector streets at 60 feet.

30. **Comment:** Robert Caso asked about provisions for buffering between different uses.

Response: Policies are included in the General Plans. Future zoning ordinance amendments would take policies a step further.

31. **Comment:** Velma Robinett asked when Spring Street would be finished.

Response: Spring Street is included as part of the City's current Capital Improvement Program.

32. **Comment:** Mr. Caso asked about possible CalTrans involvement in access issues to the Auto Center along Spring Street.

Response: The City will have to coordinate any freeway ramp modifications with CalTrans and the City of Long Beach.

33. **Comment:** Sara Dodds asked if there was a recent recommendation to sell the hilltop reservoir site by the Council.

Response: The City Council only decided that the current reservoir site was not suitable for the future location of the reservoir.

34. **Comment:** Robert Caso asked where the subject of the interface with oil production activities was included.

Response: Discussions are included in the Environmental Resources, Safety, Noise and Land Use Elements.

RESPONSES TO MAJOR COMMENTS AND ISSUES

General Plan Workshop IV

February 27 1986

Department of Planning and Community Development

SUMMARY RESPONSES TO MAJOR COMMENTS AND ISSUES RAISED ON FEBRUARY 27, 1986 ON THE PROPOSED GENERAL PLAN

1. **Comment:** Robert Caso asked how the Housing Element related to the SCAG Regional Housing Allocation Model.

   Response: The Element identifies the need for 650 new drilling units through 1989 consistent with the SCAG Model. Approximately 42% of these units are recommended at the very low and low income level with 48% at the moderate and high income level.

2. **Comment:** Robert Caso asked what Affirmative Actions were being taken in the plan to encourage those who work here to live in the City.

   Response: About 50% of the civilian labor force in Signal Hill work in the local labor market which is the greater Long Beach area. Additional units to be constructed in the City will obviously provide additional opportunities for those who work in the City to also live here. However, no other specific actions are taken in the Plan. This might be a more significant issue if the City was larger and did not relate to a larger labor market area.

3. **Comment:** Commissioner Nunes commented that with the past proliferation of condos there have been increases in renters in the City. He asked if the Plan was going to omit rentals.

   Response: Plan policies and programs do not propose to limit rental units. However, it is recommended that ownership opportunities be encouraged.

4. **Comment:** Mayor Dare commented that the problem with condo rentals was there is no on-premise manager.

   Response: No response.

5. **Comment:** Councilwoman Blacksmith asked what was considered lower income and who could afford to live in low-income units.

   Response: Low income is 80% of the Los Angeles County medium income. The current maximum income for a family of four would be $24,150. Moderate income units would be limited to a maximum income of $36,225. An explanation of HUD's Section 8 rental assistance program was also provided.

6. **Comment:** Susan Bemis commented that a manager is required when there are 16 or more units.

   Response: Commissioner Barnes responded that the law only applies when one owner owns 16 or more units.

7. **Comment:** Mayor Dare asked that as part of the CC&R's, did the City have any control.

Response: A contact person is now required as part of the CC&R's.

8. **Comment:** Mr. Caso commented on the disappearance of the single family dwelling. The condo was suppose to be the market's answer. The consensus now is that condos are not good for the long term. However, the small 3 and 4 unit condos that look like a house have amenities and efficiences of space. He asked how one can provide incentives for this type of housing? This type of owner-occupied project should be encouraged.

   Response: No response.

9. **Comment:** Commissioner Barnes asked the staff to explain forthcoming ordinance changes.

   Response: Forthcoming proposed ordinance amendments recommend Planned Development Districts to regulate development on the southwest and northeast flanks of the Hill.

10. **Comment:** Mr. Poor, an attorney for Mr. Hal Tobin, asked about the procedure for adjusting a boundary on the proposed Land Use Map to allow for more density on three lots along 19th Street.

    Response: Commissioner Barnes noted that the Land Use Element had been discussed on February 20, 1986, but a short response by staff could be provided. The site in question is bordered by a high density area to the south of 19th. The entire area to the north and east is proposed at low density (5-10 dwelling units per acre).

11. **Comment:** A letter from Sara Dodds was read (attached).

    Response: In response to Ms. Dodd's letter, the following rebuttals were made. A workshop on density was held in December, 1985. The workshop in August, 1985 was only to review alternatives and environmental issues. The proposed plan does recommend development of urban design guidelines and streetscape plans. Preparation of the plan has been inclusive of citizen involvement. A model of sloped areas of the City could be a requirement of development.

12. **Comment:** Robert Caso agrees that a model would be expensive. However, he feels that a typical 2 acre plan to show what can be done would be helpful to show the public what is possible. He feels everyone's minds are set on the image of the white elephant, but there may be other solutions. A 3 dimensional look would be a help. Maybe school kids could make a model for $500.

    Response: Models would be good on large sloped area and can be essential on those steeply sloped portions of the hilltop. A City-wide model could cost as much as $50,000.

13. **Comment:** Arlene Bly commented that she didn't think Signal Hill was going to be a Beverly Hills or Laguna Beach. She felt it was terrible to keep changing zoning. It was also hard to make oil derricks look good. She also asked if the Barto's would be providing parks on their property.

    Response: Craig Barto responded that they would love to but may not be able to develop with the 1-5 dwelling unit designation for the property. At 5-10 dwelling

unit designation, they could come up with a better project. Susan Bemis added that the Signal Hill Company has hired someone to look at different options. They want to enhance the area with open space and beautiful entrances but won't be able to afford to at 1-5 dwelling units per acre.

14. **Comment:** Arlene Bly commented that there used to be one acre sites on the hilltop with beautiful homes.

    Response: No response.

15. **Comment:** Mayor Dare asked with existing constraints, what 1-5 dwelling units would look like.

    Response: Due to severely sloped areas on the site along with continuing oil production, the 35 acres on the southwest flank of the Hill may only have 15 developable acres. With clustering, undevelopable areas would be left in an open state with development concentrated at higher densities on those portions of the site that are not subject to severe constraints.

16. **Comment:** Mayor Dare asked what the exact number of units would be under this clustered concept.

    Response: No site specific analysis has been completed. Development and actual density (not to exceed the figures contained in the General Plan) would be subject to Planned Development regulations to be adopted concurrently with the General Plan.

17. **Comment:** Robert Caso commented that he wasn't working for the Barto's but feels that pathways and greenbelts would be beautiful on the Hill. He indicated that if Mr. Barto says it can't be done, why avoid a fixation on numbers. He asked the City to reach a compromise to avoid litigation.

    Response: The General Plan does retain an economic use of the property while policies and programs provide the kind of amenities mentioned by Mr. Caso.

18. **Comment:** Councilman Ceccia stated that the Council did not ask for a specific density but a creative plan that the City could be proud of which would upgrade the City.

    Response: No response.

19. **Comment:** Arlene Bly stated that the Plan needs to be presented to the public.

    Response: Councilman Ceccia noted that notices and schedules have been mailed. Commissioner Barnes asked about the comments he addressed about the Plan.

20. **Comment:** Mr. Tobin commented that his property had been down-zoned 3 times in 4 years.

    Response: Councilman Ceccia responded that this was a political question. He was elected on platform of lower density. So the staff was told to produce a plan for lower density. The City is implementing what voters have asked for.

21. **Comment:** Mr. Tobin commented that beyond a mandate from voters, lawmakers must be fair to land owners to allow them to realize a return. The investors in his project have suffered significant losses. For his property, there should be some adjustment.

Response: No response.

22. **Comment:** Velma Robinett indicated her opposition to the City's ability to take her property and asked by what authority the City could proceed. She has for over one year voiced this opposition.

Response: Mrs. Robinett's property is in the proposed Auto Center project area where the Agency has authorized acquisition. The proposed General Plan does not propose any change that is inconsistent with the current land use designation of her property.

23. **Comment:** Mr. Tobin commented that the Supreme Court was currently reviewing the issue of taking particularly regards to compensation for down-zoning.

Response: There is currently nothing on the books which would require compensation and that's the basis on which the City should proceed.

24. **Comment:** Susan Bemis asked to explain the recommendation contained in the Safety Element for a slope warranty.

Response: It's very similar to a landscaping warranty guaranteeing the maintenance of a slope by developer normally for a period of 1-5 years.

25. **Comment:** Craig Barto questioned the recommendation in the Noise Element limiting oil well servicing to week days.

Response: The proposed Oil Code recommends weekdays. However, servicing would be permitted at any time in an emergency.

26. **Comment:** Robert Caso asked how the Noise Element dealt with Long Beach's Part 150 Study for the airport. He also commented on the safety of roadways at intersections and on slopes such as Walnut and Cherry and who was resposible for ensuing an adequate line of sight.

Response: The Noise Element clearly incorporates information on the Part 150 study. With regards to Cherry, the right-of-way is expected to be lowered where line of sight is not the best (as part of 2nd phase widening). The City also requires a 45 foot on-site radius at corner intersections where no structure can exceed 36 inches to ensure adequate sight line.

27. **Comment:** Susan Bemis stated that the EIR mentions increased housing costs. They would like to see an economic analysis as part of the Environmental Impact Report. They would also like a mitigation measure added that requires the City to participate in infrastructure costs. She also stated that low density proposed for their property would hurt the proposed shopping center and their ability to get tenants. She questioned who would provide financing for high income housing.

Response: CEQA does not require an evaluation of economic impacts and as such, such an evaluation has been deemed inappropriate in the EIR. The General Plan and proposed zoning amendments that will regulate development will provide for a variety of bonus incentives for provision of low or moderate income housing, infrastructure participation being undivided. The appropriate choice of such incentives will be on a project specific basis subject to City Council approval.

28. **Comment:** Susan Bemis commented that if land was purchased for free there would still not be any affordable units.

Response: This is an exaggeration that isn't valid, particularly since moderate income housing is for those at incomes of up to 120% of the L.A. County medium income.

29. **Comment:** Robert Caso asked whether the EIR was a master EIR or whether an additional EIR would be rquired for future projects.

Response: The EIR is an EIR for the General Plan and code amendments only, it is not project specific.

30. **Comment:** Robert Caso asked if the EIR showed less impact for the lower density alternative proposed by the Plan.

Response: The narrative in the EIR discusses the impacts of each alternative.

31. **Comment:** Robert Caso asked if the Auto Center and Eastman projects were specifically evaluated in the EIR.

Response: The year 2000 annd build-out square footage and acreage in the Plan are a comprehensive assessment of future growth. Individual projects, however, may require detailed environmental review.

32. **Comment:** Robert Caso commented that he felt that any Statement of Overriding consideration adopted for the EIR should be comprehensive with regards to impacts on housing.

Response: No response.

33. **Comment:** Commissioner McManus asked about the City's parks and recreation shortage and whether 4 acres per 1,000 persons was the City's standard to be achieved or dictated by other Agency's.

Response: The 4 arces/1,000 standards is the City's adopted standard but is based on recommended recreational standards promulgated throughout the State and Nation. Joint use of Long Beach Unified School Property as well as the proximity of Long Beach recreational facility can meet a portion of the City's recreational needs. The City's Subdivision Ordinances also requires dedication of land or fees for residential projects of 5 units or more; only fees are collected for projects less than 50 units.

34. **Comment:** Robert Caso asked if there was a summary of the Plan.

Response: Upon adoption of the Plan, a condensed document is contemplated. Copies of the Plan are readily available for purchase or can be checked out at the library.

35. **Comment:** Robert Caso asked about expiration dates of moratoriums.

Response: April 6th and 22nd.

February 27, 1986
2700 Panorama Drive
Signal Hill, CA 90806

Christine Shingleton
Director of Planning & Community Development
2175 Cherry Avenue
Signal Hill, CA 90806

Regarding General Plan Workshop:

Per your request, I am submitting the following written comments for the public work shop.

I am in general agreement with the provisions of this plan. There was a lot of good work that went into this substantial and costly document. However, because there is no indication of a clear vision for our future, it seems wrong to me, to spend so much money rehashing our existing plan in order to justify the new zoning.

There was a questionaire handed out at the initial, August 1985 meeting. The questions covered did not refer to reduced density, the heart of the issue, but assets, problems, parks, services, and six questions on noise. Are the results or tally of responses from that questionaire available? What were they?

This document does not give us a clear vision, but rather many generalities, such as "...something special to differentiate us from Long Beach," such as enhancing the entrances to the city. The only example we have seen is the concrete and steel wall at GenTel on Cherry.

Once again, I would like to suggest a committee made up of people with Signal Hill interests, including residents, city staff, Signal Hill businesses and a planning expert be established - at NO COST TO THE CITY - to develop a plan with recommendations for our citys future development.

Lastly, if Signal Hill had a model of our city our policy makers could visualize the impact these developments have on each other, and the hill. A model would be a useful tool for our city. That is why experts, and many other cities use models, they really are a necessity. A model is a three dimensional record of our city and should be as important a fixture in our planning as this document. I guarantee it will be more immediately and easily understood than any volumes of paper printed and bound.

Thank you,

Sara

Sara Dodds

cc Frank B. Wein, Michael Brandman Associates, Inc.

GENERAL PLAN WORKSHOP III

February 27, 1986

List of Attendees

Name	Phone #
Arlene Bly	
Janis David	424-5734
Kris Beard	426-3862
Tom Nunes	493-3862
Jack McManus	298-3214
D. L. Barnes	424-0121
Doris Gylseth	494-5245
Robert Caso	424-7070
Susan Bemis	(714) 557-0711
Velma Robinett	422-3356
Gerry R. Lee	422-3356
Hal Tobin	(714) 840-3581
Ed Forde	(714) 840-3581
Valerie Williams	492-1548
Louis Dare	
Gerard Goedhardt	
Richard Ceccia	
Jessie Blacksmith	
Alan Hoff	
Frank Wein	
Christine Shingleton	
Gary Jones	
Karen Bush	

RESOLUTION NO. 86-03-3770

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SIGNAL HILL ADOPTING COMPREHENSIVE REVISIONS TO THE SIGNAL HILL GENERAL PLAN

WHEREAS, Section 65300 et seq. of the California Government Code mandates that each City adopt a comprehensive, long-term General Plan for the physical development of the City, and any land outside its boundaries which bears relation to its planning; and

WHEREAS, state law recommends that the entire General Plan be reviewed at least every five years and revised, as necessary, to ensure internal consistency; and

WHEREAS, a revised General Plan was deemed necessary for the orderly and sound future development of the City including the protection of the public, health, safety and general welfare; and

WHEREAS, the Signal Hill City Council authorized a program to undertake a comprehensive revision to the entire General Plan during fiscal year 1984-85; and

WHEREAS, after extensive study and research a revised General Plan has been prepared in accordance with the requirements of state law which addresses all issues and topics required; and

WHEREAS, during preparation of the revised General Plan, opportunities were provided for the involvement of citizens, public agencies, public utility companies and civic, education and other community groups; and

WHEREAS, after providing proper legal notice, the City Council conducted a public hearing on the proposed General Plan on March 18, 1986 and provided all persons an opportunity to express their opinions; and

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Signal Hill does hereby adopt comprehensive revisions to the Signal Hill General Plan.

PASSED, APPROVED and **ADOPTED** on March 18, 1986.

Louis A. Dare

LOUIS A. DARE, MAYOR
CITY OF SIGNAL HILL

ATTEST:

Kris C. Beard

KRIS C. BEARD, CITY CLERK
CITY OF SIGNAL HILL

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES)
CITY OF SIGNAL HILL)

I, KRIS C. BEARD, City Clerk of the City of Signal Hill, hereby certify that Resolution No. 86-03-3770 was adopted by the City Council of the City of Signal Hill at a regular meeting on the 18th day of March, 1986, and that the same was adopted by the following vote:

AYES:	MAYOR DARE, MAYOR PRO TEM BLACKSMITH COUNCILMEMBERS BELLIS, CECCIA AND GOEDHART
NOES:	NONE
ABSENT	NONE
ABSTAIN:	NONE

Kris C. Beard

KRIS C. BEARD
CITY CLERK

EXHIBIT B

A SUMMARY DISCUSSION OF SIGNIFICANT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES IDENTIFIED IN DRAFT EIR 85-03

I. ADVERSE IMPACTS WHICH CAN BE MITIGATED OR SUBSTANTIALLY REDUCED IN SEVERITY.

A. NOISE

1. Impact Summary - Noise generated from traffic will incrementally increase due to population growth and redistribution of density. In addition, new industries may relocate/establish themselves in the City, generating noise related to traffic and the operation of the facilities.

2. Mitigation Measures - Noise impacts would be minimized by locating noise-sensitive land uses away from noise sources. Other mitigation measures include earth berms and walls to be installed between the noise source and receptor to decrease noise transmission.

B. TRANSPORTATION AND CIRCULATION

1. Impact Summary - The proposed circulation system alleviates much of the existing congestion and circulation inefficiences; however, traffic volumes are expected to increase and would subject a few roadway segments to exceed Level of Service "C" by the year 2000.

2. Mitigation Measures - Transportation impacts can be minimized by constructing the recommended circulation system to its master-planned classification; restricting on-street parking on Willow Street and Pacific Coast Highway, signal timing and other traffic engineering measures, as appropriate.

The City should design and implement a land use/traffic generation

monitoring system to provide information on increases in traffic demand as the City continues to grow.

C. PARKS AND RECREATION

1. Impact Summary - As the population increases, additional park land would need to be designated to provide residents with adequate park facilities.

2. Mitigation Measures - The City should explore developing an agreement with the City of Long Beach to permit school grounds and park land in the City of Long Beach to become available for recreational uses by Signal Hill residents. Additional mitigation measures are provided in the EIR, including current subdivision requirements for dedication of land or payment of fees in lieu of land for parks and recreational facilities.

D. STORM WATER DRAINAGE

1. Impact Summary - As new areas within the City of Signal Hill are developed, local drainage facilities will need to be constructed. Specific drainage facilities in four particular areas of the City would need to be improved in the future.

2. Mitigation Measures - Mitigation measures for impacts related to adequate drainage facilities within the City are described in the Circulation and Infrastructure Element of the proposed Signal Hill General Plan.

II. SIGNIFICANT IMPACTS WHICH CANNOT BE ENTIRELY MITIGATED OR AVOIDED.

A. AIR QUALITY

1. Impact Summary - As the City continues to grow, impacts to the ambient air environment would occur from both mobile and stationary emissions. Significant increases in traffic volumes on local streets

increase automobile-related emissions and industrial development may also increase air pollutant levels.

2. Mitigation Measures

- Reduce total vehicle miles traveled by promoting ridesharing (i.e., carpools, etc.) and encouraging new development, provide bicycle racks.

- Encourage future residential and commercial uses to be preplumbed for fixture installation of solar water heaters to reduce stationary source emissions. Thermal installation and proper building design would also reduce household electrical and natural gas consumption and result in reduced generation of emissions.

- There are also numbers of other mitigation measures contained in the proposed General Plan which will reduce vehicle miles traveled, such as continuation of the City's Dial-a-Lift Program and development of transit facilities with new development, etc.

B. SCHOOLS

1. Impact Summary - It is estimated that the City's population would general 309 students through the year 2000, and approximately 400 students at buildout.

2. Mitigation Measures - Impacts related to schools cannot be mitigated to a level of insignificance. New construction, reconstruction and installation of temporary emergency classrooms are options available to the City to alleviate school-related impacts. Due to enrollment fluctuations during the past decade, temporary classrooms may offer the most feasible of these options.

Funding altenatives are open to the school district for construction, reconstruction or other school expansion means including school facilities assistance programs administered by the State Board of Allocations; [illegible] authorization tax levy; state lottery money; Mello-Roos Community Facilities District funds.

C. POPULATION AND HOUSING

1. Impact Summary - Density reductions in residential areas will reduce the number of units that a developer can construct, increasing initial investment costs. Therefore, cost of housing would potentially increase, resulting in a significant housing impact.

2. Mitigation Measures

- Density bonuses (as in the proposed General Plan)
- Reducing development processing time
- Waiver or reduction in permit fees
- Exemption of dedications

RESOLUTION NO. 652-86

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SIGNAL HILL RECOMMENDING ADOPTION OF COMPREHENSIVE REVISIONS OF THE SIGNAL HILL GENERAL PLAN

WHEREAS, Section 65300 et seq. of the California Government Code mandates that each City adopt a comprehensive, long-term General Plan for the physical development of the City, and any land outside its boundaries which bears relation to its planning;

WHEREAS, state law recommends that the entire General Plan be reviewed at least every five years and revised, as necessary, to ensure internal consistency;

WHEREAS, a revised General Plan was deemed necessary for the orderly and sound future development of the City including the protection of the public, health, safety and general welfare;

WHEREAS, the Signal Hill City Council authorized a program to undertake a comprehensive revision to the entire General Plan during fiscal year 1984-85;

WHEREAS, after extensive study and research a revised General Plan has been prepared in accordance with the requirements of state law which addresses all issues and topics required;

WHEREAS, during preparation of the revised General Plan, opportunities were provided for the involvement of citizens, public agencies, public utility companies and civic, education and other community groups;

WHEREAS, after providing proper legal notice, the Planning Commiss conducted a public hearing on the proposed General Plan on March 6, 1986 provided all persons an opportunity to express their opinions;

NOW, THEREFORE, BE IT RESOLVED THAT the Planning Commission of the City of Signal Hill does hereby recommend to the City Council the adoption of comprehensive revisions to the Signal Hill General Plan subject to addition of an appendix to the General Plan defining the criteria for areas designated under slum or blight.

PASSED, APPROVED and **ADOPTED** by the Planning Commission of the City of Signal Hill this 6th day of March, 1986, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

DWIGHT BARNES, CHAIRMAN
SIGNAL HILL PLANNING COMMISSION

ATTEST:

CHRISTINE A. SHINGLETON, DIRECTOR
PLANNING & COMMUNITY DEVELOPMENT

MAP EXPLANATION

Potentially Active Faults



Faults considered to have been active during Holocene time and to have a relatively high potential for surface rupture: solid line where accurately located long dash where approximately located, short dash where inferred, dotted where concealed: query (?) indicated additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by creep or possible creep

STATE OF CALIFORNIA

Alquist-Priolo Special Studies Zones Act

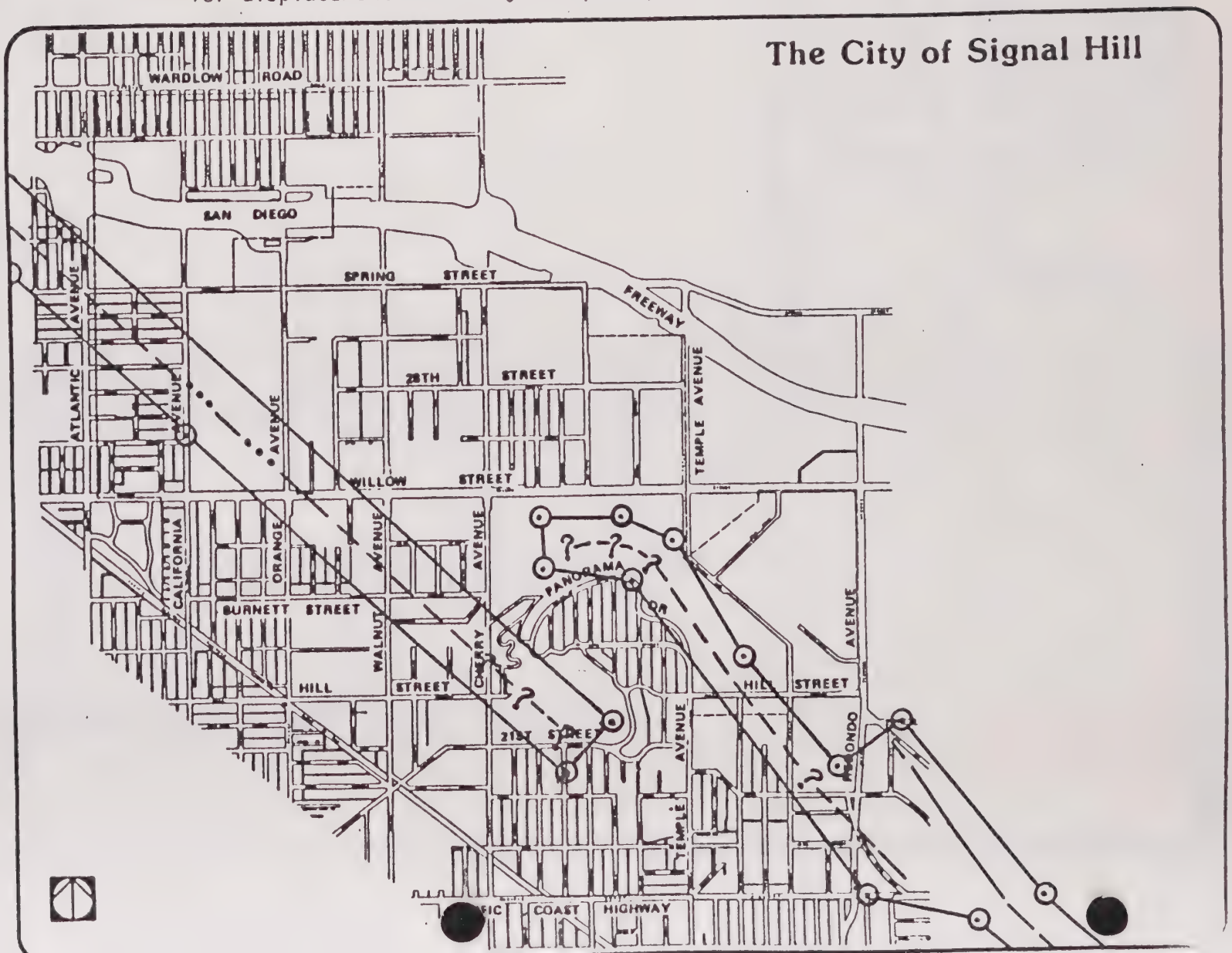


Figure 3

PROPOSED GENERAL PLAN LAND USE POLICY MAP



LEGEND

KEY

1.1 VERY LOW RESIDENTIAL DENSITY	up to 5 d.u./acre
1.2 LOW RESIDENTIAL DENSITY	5-10 d.u./acre
1.3 MEDIUM RESIDENTIAL DENSITY	10-15 d.u./acre
1.4 HIGH RESIDENTIAL DENSITY	15-21 d.u./acre

2.0 MIXED USE

3.1 TOWN CENTER

3.2 COMMERCIAL GENERAL

3.3 COMMERCIAL OFFICE

3.4 COMMERCIAL INDUSTRIAL

4.1 LIGHT INDUSTRIAL

4.2 GENERAL INDUSTIAL

5.0 OPEN SPACE

SPECIAL STUDY AREA

* PRECISE/SPECIFIC PLAN REQUIRED

REVISED 7/88



SCALE

0 400 800 1200 2000

CITY OF SIGNAL HILL

U.C. BERKELEY LIBRARIES
C124910391

TABLE 1
POPULATION TRENDS

	Signal Hill		Long Beach		L.A. County	
YEAR	TOTAL	ANNUAL GROWTH RATE	TOTAL	ANNUAL GROWTH RATE	TOTAL	ANNUAL GROWTH RATE
1940	3,184	—	164,271	—	2,785,043	—
1950	4,040	2.7	250,272	5.2	4,151,687	4.9
1960	4,627	1.5	344,168	3.8	6,038,771	4.5
1970	5,582	2.1	358,633	.4	7,040,679	1.6
1980	5,734	.3	361,334	.1	7,477,657	.6
1981	5,874	2.4	362,831	.4	7,699,413	2.9
1982	6,255	6.5	368,300	1.5	7,630,500	.9
1983	6,973	11.5	373,100	1.3	7,763,800	1.7
1984	7,345	5.3	376,034	.8	7,861,344	1.3

SOURCES: U.S. Department of Commerce, Census Bureau, Signal Hill Department of Planning & Community Development, California State Department of Finance.

TABLE 3

POPULATION BY AGE: 1970 - 1980

AGE CATEGORY	SIGNAL HILL 1970 Total	1970 %	SIGNAL HILL 1980 Total	1980 %	LOS ANGELES COUNTY 1980 %
Under 5	508	9.1	457	8.0	7.4
5 - 9	365	6.5	317	5.5	7.1
10 - 14	265	4.7	259	4.5	7.4
15 - 19	318	5.7	304	5.3	8.9
20 - 24	783	14.0	790	13.8	10.0
25 - 34	936	16.8	1278	22.3	17.9
35 - 44	519	9.3	661	11.5	11.9
45 - 54	562	10.1	573	10.0	10.2
55 - 59	308	5.5	247	4.3	5.1
60 - 64	249	4.4	230	4.0	4.2
65+	775	13.9	618	10.8	9.9
Totals	5,588	100.0	5734	100.0	100.0

	1970	1980	1983
Population in Households[1]	5,212	5,424	6,689
Number of Households	2,238	2,470	3,018
1 Person	698	859	—
2 or more Persons	1,419	1,611	—
Type of Households			
Family		1,322	—
Married		975	—
Male/no spouse		125	—
Female/no spouse		222	—
Non-Family		1,148	—
Persons in Group Quarters	370	310	284
Persons/Household	2.33	2.2	2.2

[1]excludes persons in group quarters
Source: U.S. Bureau of Census, Department of Finance Urban Decision Systems

TABLE 5

INCOME CHARACTERISTICS

	1970		1980	
	Number of Households	%	Number of Households	%
Very Low Income	514	25.0	443	17.96
Low Income	493	22.0	598	24.20
Moderate Income	671	30.0	556	22.30
Upper Income	560	25.0	879	35.60
Totals	**2,238**	**100.0**	**2,470**	**100.00**

	1970	1980
L.A. County Median Income	$11,091	17,563
Signal Hill Median Income	7,351	16,267
Signal Hill Family Income	9,398	19,015

NOTE:

Very Low Income — Households earning less than 50% of the L.A.CO.[1] Median Income.
Low Income — Households earning 50% to 80% of the L.A.CO. Median Income.
Moderate Income — Households earning between 80% and 120% of the L.A.CO. Median Income.
Upper Income — Households earning more than 120% of the L.A.CO. Median Income.

TABLE 5

CITY OF SIGNAL HILL

LARGEST MANUFACTURING AND NON-MANUFACTURING EMPLOYERS, 1984

Employers	Number of Employees
Pacific Valve	559
General Telephone Co	353
Eastman, Inc.	364
Petrolane Gas, Inc.	230
Gemco	176
Willis Oil Tool Company	139
Hawk Industries	100
Ofcco Construction	100
Oil Well Service Company	70
Page Oil Tools	56

1 Business license records may actually be a very conservative estimate of employment since businesses may not report all required information.

2 ICE Project Joint Effort of the California Employment Development Department and the Los Angeles County Department of Regional Planning, 1973.

TABLE 13

INDUSTRY AND OCCUPATION

OF EMPLOYED RESIDENTS IN SIGNAL HILL

EMPLOYMENT CLASSIFICATION	1980 TOTAL	1980 PERCENTAGE	1984 TOTAL [1]
INDUSTRY	**2879**	**100.0**	**3510**
Agriculture	70	2.4	85
Construction	176	6.1	215
Manufacturing Non-Durable	158	5.5	193
Manufacturing Durable	610	21.2	744
Transportation	134	4.7	163
Communication	94	3.3	115
Wholesale Trade	175	6.1	213
Retail Trade	340	11.8	414
Finance	163	5.7	199
Business/Repair	179	6.2	218
Personal	112	3.9	137
Professional Health	304	10.6	371
Professional Education	133	4.6	162
Professional Other	123	4.3	150
Public Administration	108	3.6	132
OCCUPATION	**2879**	**100.0**	**3510**
Managerial Administrative	339	11.8	413
Managerial Speciality	344	11.9	419
Technical/Sales Technicians	72	2.5	88
Technical/Sales Sales	264	9.2	322
Technical/Sales Clerical	568	19.7	692
Service Private House	15	.5	18
Service Protection	22	.8	27
Service Other Service	279	9.7	340
Farming/Forestry	31	1.1	38
Craft/Repair	508	17.6	619
Operator/Laborer Assemblers	170	5.9	207
Operator/Laborer Transportation	202	7.0	246
Operator/Laborer Laborer	65	2.3	79
OCCUPATION CLASS	**2879**	**100.0**	**3510**
Private Wage	2234	77.6	2723
Federal Employee	105	3.6	128
State Employee	74	2.6	90
Local Government	253	8.8	308
Self-Employed	213	7.4	260
Unpaid family	Ø	Ø	Ø

[1] Based on straight line projection. Employment labor force is greater than 16 and less than 64 years old.

COMMUNITY ECONOMIC PROFILE

for

SIGNAL HILL, LOS ANGELES COUNTY, CALIFORNIA

prepared by the

SIGNAL HILL CHAMBER OF COMMERCE

Based on the format established by the

California Chamber of Commerce

September, 1979



1. LOCATION:

Signal Hill, incorporated 1924, is located 25 miles south of Los Angeles and 450 miles south of San Francisco. San Diego is 111 miles south of the city.

2. ECONOMIC GROWTH AND TRENDS:

	1950	1960	1970	1978
Population in the County	4,151,687	6,038,771	7,032,075	7,108,300
*Total Taxable Retail Sales - County	5,247,658	9,841,136	15,839,730	35,785,533
Population in City Limits	4,040	4,627	5,588	5,910
*Total Taxable Retail Sales - City	26,800	26,788	46,780	174,463
Occupied Dwellings - City	1,493	1,774	2,463	2,719
School Enrollment, GR 1 - 6	499	553	697	787

Calendar Year, Not Fiscal.

Sources: Board of Equalization, Sacramento, Ca., City of Signal Hill: Planning Department.

*These figures in thousands of dollars.

3. CLIMATE:

	AVERAGE TEMPERATURE			RAIN	HUMIDITY		
Period	Min.°	Mean°	Max.°	Inches	4 a.m.	Noon	4 p.m.
Jan.	41	53	65	3.1	72	57	51
Apr.	49	60	71	1.2	78	55	49
Jul.	61	72	82	.01	80	60	52
Oct.	56	67	78	.41	79	57	52
Year	52	63	74	12.6	79	58	52

ELEVATION:
360 ft.
PREVAILING WINDS
Direction: WNW
Mean Hrly Speed:
6.5 mph
SOURCE: Long Beach
21 year average

4. TRANSPORTATION:

Rail: Union Pacific, Southern Pacific, Santa Fe, ATSF, UP.

Truck: All major truck lines serving California.

Overnight delivery to: San Francisco, San Diego, Arizona and Nevada points.

Air: Long Beach Airport (4 mile) and Los Angeles International Airport (20 miles).

Bus: Long Beach Public Transportation System, Charter and Rental Service.

Water: Within 6 miles of the Port of Long Beach.

Highways: San Diego, San Gabriel (605), Long Beach, Harbor and Garden Grove freeways intersect in close proximity to the city boundaries.

5. INDUSTRIAL SITES:

There are 400 acres in the city limits zoned for light and general industry: about 30% is vacant and available in parcels ranging in size from .5 to 5 acres. Included in this acreage total are 4 industrial parks or districts. Typical sales prices during 1978 ranged from $152,320 to $562,240 per acre. The terrain is flat. Drainage is excellent. Soil is sandy loam and piling is not required. Sizes of water mains range from 2 to 20 inches. Sizes of sewer lines range from 8 to 18 inches. Description of on- or off railroad lines, zoned for industry, outside the city limits in other tracts or districts: Signal Hill bounded on all sides by the incorporated city of Long Beach. Outside the city limits, in unincorporated areas, there exists modern, fully serviced industrial sites, within 10 miles of Signal Hill.

Site data compiled in cooperation with: Planning Department, City of Signal Hill.

6. WATER SUPPLY:

Name of Supplier: Signal Hill Water Department. Deep wells and MWD.
Maximum pumping capacity: 5 million gallons per day. Average consumption: 2 million gallons per day.
Cost per 1,000 gallons in quantities of 100,000 gallons per month: $.52
Cost per 1,000 gallons in quantities of 1,000,000 gallons per month: $.52
Water connection charges: $250.00 to $600.00.

7. SEWER SERVICE:

Name of Supplier: City of Signal Hill, County of Los Angeles.
Capacity of sewer plant: 2.6 million gallons per day. Peak flow: 1.2 million gallons per day.
Sewer service charge: No.
Type of treatment plant: Primary.
Any facilities for non-recoverable industrial waste water: No.
Sewer connection charges: $100.00.

8. STORM DRAINS AND FLOOD CONTROL:

Master plan of storm drains adopted? Yes. Charges assessed on following basis: Los Angeles County.

9. STREET IMPROVEMENTS:

Dedication requirements: Master Plan in effect. Contact City Engineering Dept.
Improvement requirements: Concrete curb, gutter, sidewalk, landscaping, water lines, sewer lines.

10. NATURAL GAS:

Name of Supplier: Long Beach Gas Department.
For rates applicable to the city of Signal Hill contact the Long Beach Gas Department office located at City Hall, 333 W. Ocean Blvd., Long Beach, Ca. 90802.

11. ELECTRIC POWER:

Name of Supplier: Southern California Edison Company.
For rates applicable to the city of Signal Hill contact the Southern California Edison Co. office located at 2800 E. Willow St., Signal Hill, Ca. 90806

12. TELEPHONE:

Name of Supplier: General Telephone Company.
For rates and types of service applicable to the city of Signal Hill contact the General Telephone office located at 6220 E. Spring St., Long Beach, Ca. 90815.

13. GOVERNMENTAL FACILITIES — TAX AND INSURANCE RATES:

a. Signal Hill has the Council/City Manager type of government. Assessed valuation 1979 - 1980: $111.96 million. County - $28,977,504,301. Ratio of assessed value to appraised value: 25% of real cash value.
b. Combined total industrial property tax rates 1979 - 1980 per $100 assessed value. Code Area(s): All Areas. Total: $4.00. City tax rate: N/A. County: N/A. School: N/A. Other: N/A.
c. Retail Sales Tax: State: 4.75%. City/Council: 1%. Mass Transit District Funding: 0.25%. Total: 6%.
d. Police Department: 28 officers, 9 patrol, 15 reserve, with an attached Explorer Post #806
e. Fire Department: Signal Hill contracts with Los Angeles County for Fire Protection, which provides 3 triple combination pumpers, 1 platform truck, rescue unit and foam unit.
f. Fire Insurance Classification: Source of Rating: Insurance Service Office. City Rating 3 to 4. Adjacent unincorporated area: No unincorporated areas.
g. Major projects authorized for improvement of city services or to adjacent unincorporated areas: Community Redevelopment Program, for improvement of city services, streets, sewer systems and storm drain development.

14. THE SIGNAL HILL, LONG BEACH LABOR MARKET AREA SURVEY 1979

Area includes Signal Hill, Long Beach, Hawaiian Gardens and Lakewood.
Estimated area population: 465,000. Estimated total employment: 202,495.

225 Agriculture	39,400 Retail Trade
25 Agricultural Services	8,450 Wholesale Trade
9,860 Construction	7,125 Finance/Real Estate/Insurance
43,160 Manufacturing	39,100 Services
11,425 Transp/Comm/Utilities	37,140 Government
Notes: _____	5,398 Other

SOURCE: State of California Employment Development Department.

15. CHARACTERISTICS OF THE LABOR FORCE:

Extent of unionization: Partial unionization exists in automotive and aerospace industries. The construction industry is entirely unionized. Partial unionization exists in petroleum industry and metal working fields. Wage rates, extent of unionization, fringe benefits, and related information for specific industries and job classifications may be obtained from the State Employment Development Department located at 1313 Pine Avenue, Long Beach, 90813, or at 800 Capitol Mall, Sacramento, CA 95814.

16. MANUFACTURING EMPLOYMENT:

There are 145 manufacturing plants in the community area. Leading group classes of products are: plastics, machine shop products, valves and oil related. The largest manufacturing firms in the community are:

NAME OF COMPANY	EMPLOYMENT	PRODUCTS
Pacific Valve, Inc.	559	valve manufacture and repair
Petrolane Gas, Inc.	230	liquid gas and insecticides
Page Oil Tools	56	oil production tools and well control valves
Midway Fishing Tool Co.	39	oil production equipment
Willis Oil Tool Co.	139	oilfield equipment
Hawk Industries	100	oil products and equipment
Battery Plates	48	battery plates
Cavins, Inc.	45	oilwell tools
MacMillan Ring-Free Oil Co.	57	oil refining and processing

Facilities include: Machine shops. Major raw material resources include: Oil.

17. NON-MANUFACTURING EMPLOYMENT:

NAME OF COMPANY	EMPLOYMENT	TYPE OF BUSINESS
General Telephone Co.	353	utility service
Gemco	176	commercial department store
Eastman, Inc.	252	office equipment and printing
Beach City Chevrolet	57	retail sales, new and used cars
Marmac Systems, Inc.	52	consulting engineers
Ofcco Construction	100	building contractor
Oilwell Service Co.	70	oilwell servicing
Lido's	50	restaurant - food servicing

18. COMMUNITY FACILITIES:

HEALTH: The Signal Hill area has 8 general hospitals with 2235 total bed capacity.
EDUCATION: 2 elementary schools, 2 junior high schools, 3 high schools, 1 junior college, 1 college or university.
CULTURAL: 8 churches, 1 library, 3 newspapers, 59 radio stations, 11 TV channels received direct, 3 TV cable systems, 7 banks, 2 parks, 1 playground. Other recreational facilities include: a nearby 1,800 boat municipal marina, community playhouse, convention center/theatre complex, 800 acre regional park, theatres and numerous fine beaches. Long Beach/Los Angeles television and radio stations. 4 major hospitals are located within a 1½ mile radius of the city of Signal Hill.

19. HOUSING AVAILABILITY, PRICES AND RENTALS:

Rentals for one and two bedroom apartments and duplexes range from $200.00 to $480.00 per month. Rentals for two and three bedroom houses range from $300.00 to $500.00 per month.

Sales prices of existing homes were from $35,000 to $190,000 during 1978 - 79. There are many suburban residential areas within 4 miles of Signal Hill offering homes priced from $30,000 to $350,000..

There are 19 hotels with 1449 total rooms and 90 motels with 2643 total rooms in the community area. There are 15 mobile home parks in the community area.

20. REMARKS:

As a major land form, Signal Hill is unique in the Southern California area. Due to its regional location, isolated as a land mass in a generally flat area, and adjacent to one of the major north - south freeway connectors, Signal Hill is one of the significant physical points destined to become a major urban center. The natural topography and a unique plan create a development which responds directly to needs of residential, commercial and industrial functions within an urban environment.

NOTES:

Reviewed for statewide standardization by the California Chamber of Commerce, Department of Economic Development and Research, 455 Capitol Mall, Sacramento, California, 95814, September 11, 1979.

For further information contact Signal Hill Chamber of Commerce, 1919 East Hill Street, Signal Hill, California, 90806.

CITY OF SIGNAL HILL

View Protection Policy

Section 1. Purpose

The hillsides in Signal Hill provide the City with its most identifying feature. The views both from and of the hill are a limited natural resource, enjoyed by residents and visitors. The City's General Plan discusses the importance of views in several of the General Plan Elements. The Environmental Resources Element states that one of the City's goals is to "maintain and enhance the identity and aesthetic quality of Signal Hill as a City with striking view potential." That Element also includes Policy 1.1, which states the City will "protect views both to and from the Hill and other scenic features. This will extend to all new development and to major rebuilding and additions."

Specifically, this View Protection Policy accomplishes the following:

1. Clarifies the circumstances under which a view analysis is required.

2. Establishes procedures for providing proper notice of potential view impacts.

3. Establishes guidelines against which views will be determined eligible for preservation.

4. Establishes acceptable methods of analysis and provides guidelines for evaluation of results.

5. Establishes guidelines for the recommendations of modifications to proposed projects in order to protect views.

Section 2. Procedures and Requirements For Level 1 View Analysis

Any person proposing to develop a project which requires Site Plan and Design Review, as specified in Chapter 20.52 of the Signal Hill Municipal Code, shall submit with the Site Plan and Design Review application, a Level 1 view analysis. The Level 1 view analysis shall contain the following information:

1. A description of the topography of the project site and of all sites within 500 feet of the subject site.

2. A description of all uses and structures within 500 feet of the subject site.

3. A description of the potential view impacts of the proposed project on any property within 500 feet of the subject site.

The applicant may use a variety of methods to provide the information required, including but not limited to photographs, plot plans, grading plans, streetscapes, pad elevations, written descriptions, and documentation from neighboring residents and/or property owners.

The Planning Department shall verify the accuracy of the information provided through site visits and comparison of data with existing City records concerning the site.

Section 3. Procedures and Requirements for Level 2 View Analysis

A. Circumstances Requiring Level 2 View Analysis --

A Level 2 view analysis shall be required when the following conditions exist:

1. A Level 1 view analysis indicates that a proposed project may impact existing views.

2. A Level 1 view analysis indicates a proposed project will not impact existing views, but staff is unable to verify the accuracy of that analysis.

B. Noticing For Level 2 View Analysis --

All projects which require a Level 2 view analysis shall be noticed in the following manner:

1. The applicant shall take reasonable steps established by the City to consult with owners and residents of property located within 500 feet of the subject site. The applicant shall submit to the Planning Department the signatures of all individuals with whom the applicant consulted.

2. The applicant shall submit two sets of mailing labels for all property owners, residents, and homeowners' associations within 500 feet of the subject site. The City shall send a written notice of potential view impacts to each individual. Such notice shall contain a deadline for written comments.

3. The applicant shall post a copy of the view impact notice on the property. The notice shall be readable and/or readily accessible from the public right-of-way.

4. The Director of Planning may reduce the noticing requirements if a Level 1 view analysis clearly indicates that limited numbers of existing structures will be affected by the proposed development. In such instance, only the affected owners/residents would require special notice.

C. Preparation of Level 2 View Analysis

1. An applicant shall provide a description of all existing views from an affected unit. Such description may include photography and/or narrative.

2. The applicant shall evaluate each affected view to determine if each view qualifies as a "primary view" or "secondary view" eligible for preservation. Standards for evaluation are contained in Section 3,D.

3. Staff shall verify the accuracy of the evaluation completed by the applicant.

4. A Level 3 analysis shall be completed for all views determined to be primary or secondary views.

D. Designation of Primary and Secondary Views

1. An applicant shall designate the primary and secondary viewing areas in each affected building.

2. A viewing area shall be designated a "primary viewing area" if two or more of the following conditions exist:

   a. The view is the only view in the structure.

   b. The view is the resident's most important view.

   c. The subject of the view is a unique landmark, such as the Queen Mary, Long Beach Skyline, Palos Verdes, ocean, Los Angeles, San Gabriel/Santa Ana mountains.

3. A viewing area shall be designated a "secondary viewing area" if only one of the above conditions exists.

4. A viewing area excludes bathrooms, hallways, garages, closets, and outdoor required setback areas.

5. The following view subjects are not eligible for analysis or preservation.

   a. Buildings on neighboring lots;
   b. The sky;
   c. Vacant land that is developable under City code;
   d. Alleys or streets.

E. Preparation of Level 3 View Analysis

1. The applicant shall consult with the Planning Department to determine the appropriate methods of analysis based on the site location, the type of proposed project, the potential view impacts, and the topography. Acceptable methods for a Level 3 View Analysis may include one or more of the following:

   a. The applicant should photograph the existing view, use on-site markers to establish scale and perspective, and superimpose (draw) the outline of the proposed structure on the photographs.

   b. The applicant should use a plot plan to show the location of the proposed structure relative to existing units and indicate the horizontal view area.

   c. The applicant should photograph and/or sketch a streetscape showing pad elevations of existing and proposed structures and indicate existing verticle views.

   d. The applicant should prepare a computer generated analysis.

2. An applicant may be required to prepare more than one analysis for each view, if the Director of Planning determines that one analysis may not accurately represent the potential impact. For example, an applicant may be required to analyze the view from an outdoor balcony, and analyze the same view from a location within the unit. All analyses should be taken between 4 feet and 6 feet above floor level.

3. Any affected property owner or resident who challenges the accuracy of an applicant's analysis may prepare a view analysis for review by the Planning Commission.

Section 4. Evaluation of View Analysis

A. All projects shall preserve, to the extent possible, all views designated as "primary views" and "secondary views" with greater emphasis places on the preservation of "primary views."

B. In an effort to preserve existing views, an applicant may be required to make any or all of the following modifications to the proposed project:

- Reduce square footage;
- Increase setbacks;
- Eliminate bedrooms;
- Revise roofline including decreasing the area of a second story;
- Revise floor plan.

Section 5. Amendments

To the extent the Planning Commission finds that changes to this Policy are necessary to effectuate or enhance the purposes of this Policy as stated in Section 1, the Planning Commission may amend this policy at any time.

LOS ANGELES COUNTY POPULATION AND HOUSING ESTIMATES
January 1, 1994

CA. DEPARTMENT OF FINANCE
DEMOGRAPHIC RESEARCH UNIT
PRINTED 04/28/94

CONTROLLED	POPULATION			HOUSING UNITS								PERSONS PER
					SINGLE		MULTIPLE					
CITY	TOTAL	HOUSE-HOLD	GROUP QUARTER	TOTAL	DETACHED	ATTACHED	2 TO 4	5 PLUS	MOBILE HOMES	OCCU-PIED	% VACANT	HOUSE-HOLD
AGOURA HILLS	21005	21005	0	7035	5132	1060	171	663	9	6757	3.95	3.109
ALHAMBRA	86261	84188	2073	30035	12615	2918	4079	10403	20	28640	4.64	2.940
ARCADIA	49818	49142	676	19727	11691	1380	1429	5215	12	18581	5.81	2.645
ARTESIA	16086	15550	536	4572	3215	310	241	709	97	4442	2.84	3.501
AVALON	3166	3154	12	2063	444	440	559	615	5	1279	38.00	2.466
AZUSA	42924	41800	1124	13364	5488	1901	1409	3973	593	12795	4.26	3.267
BALDWIN PARK	72029	71448	581	17442	11649	1632	617	3109	435	16798	3.69	4.253
BELL	35823	35460	363	9436	3554	1079	1779	2595	429	9038	4.22	3.923
BELLFLOWER	63911	63296	615	24326	11474	1727	1629	7960	1536	23061	5.20	2.745
BELL GARDENS	43718	43187	531	9618	4007	1908	1562	1710	431	9254	3.78	4.667
BEVERLY HILLS	32592	32517	75	15746	5620	220	1607	8294	5	14626	7.11	2.223
BRADBURY	852	852	0	285	275	4	0	6	0	271	4.91	3.144
BURBANK	98678	97829	849	42554	19485	1556	4839	16579	95	40501	4.82	2.415
CALABASAS	17719	17641	78	7390	4587	895	177	1401	330	6701	9.32	2.633
CARSON	86307	85800	507	24695	17437	1926	597	2176	2559	23990	2.85	3.576
CERRITOS	54197	54091	106	15444	13219	1226	458	537	4	15105	2.20	3.581
CLAREMONT	33178	28950	4228	11258	8095	894	524	1742	3	10736	4.64	2.697
COMMERCE	12423	12309	114	3346	1960	525	285	574	2	3262	2.51	3.773
COMPTON	91609	90874	735	23313	15940	1493	2485	2813	582	22235	4.62	4.087
COVINA	44469	43890	579	16266	9085	1177	918	4564	522	15696	3.50	2.796
CUDAHY	23739	23729	10	5475	1609	1187	449	1810	420	5297	3.25	4.480
CULVER CITY	39470	38509	961	17115	6404	1474	2244	6831	162	16241	5.11	2.371
DIAMOND BAR	54507	54507	0	17819	12560	2667	495	1829	268	17089	4.10	3.190
DOWNEY	94802	92877	1925	34512	20023	1368	1429	11493	199	33211	3.77	2.797
DUARTE	21279	20576	703	6853	4101	919	293	1329	211	6614	3.49	3.111

LOS ANGELES COUNTY POPULATION AND HOUSING ESTIMATES
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CONTROLLED	POPULATION			HOUSING UNITS								PERSONS PER
					SINGLE		MULTIPLE					
CITY	TOTAL	HOUSE-HOLD	GROUP QUARTER	TOTAL	DETACHED	ATTACHED	2 TO 4	5 PLUS	MOBILE HOMES	OCCU-PIED	% VACANT	HOUSE-HOLD
EL MONTE	110965	109168	1797	27508	14660	2942	2108	6276	1522	26419	3.96	4.132
EL SEGUNDO	15668	15668	0	7304	3146	293	855	3009	1	6876	5.86	2.279
GARDENA	53918	53052	866	20122	8168	1015	2736	7035	1168	19128	4.94	2.774
GLENDALE	190192	187289	2903	73180	25897	3456	6725	37070	32	70002	4.34	2.675
GLENDORA	49840	49053	787	17359	12703	1117	575	2091	873	16753	3.49	2.928
HAWAIIAN GARDENS	14252	14192	60	3592	1563	429	364	985	251	3457	3.76	4.105
HAWTHORNE	74438	73836	602	29460	8352	1808	3313	15777	210	27521	6.58	2.683
HERMOSA BEACH	18714	18699	15	9760	3855	942	2360	2526	77	9266	5.06	2.018
HIDDEN HILLS	1850	1850	0	550	543	6	0	1	0	539	2.00	3.432
HUNTINGTON PARK	58569	58250	319	14604	4892	1807	2547	5347	11	13973	4.32	4.169
INDUSTRY	684	381	303	143	124	5	2	4	8	106	25.87	3.594
INGLEWOOD	113623	112158	1465	39148	13691	2744	5205	17231	277	36376	7.08	3.083
IRWINDALE	1057	1057	0	288	272	7	1	2	6	268	6.94	3.944
LACANADA FLINTRIDGE	19704	19541	163	6965	6512	191	76	184	2	6735	3.30	2.901
LA HABRA HEIGHTS	6495	6495	0	2210	2184	17	1	6	2	2163	2.13	3.003
LAKEWOOD	75286	75188	98	27136	22191	598	454	3794	99	26379	2.79	2.850
LA MIRADA	44233	42671	1562	14279	11454	521	278	1876	150	13800	3.35	3.092
LANCASTER	115524	107208	8316	40747	25496	942	2720	7485	4104	36803	9.68	2.913
LA PUENTE	39284	38952	332	9691	6303	523	330	2452	83	9346	3.56	4.168
LA VERNE	31498	30926	572	11208	7135	574	799	945	1755	10812	3.53	2.860
LAWNDALE	28739	28628	111	10075	5290	1264	913	2341	267	9479	5.92	3.020
LOMITA	19628	19459	169	8300	4028	742	646	2368	516	7841	5.53	2.482
LONG BEACH	436776	421948	14828	172226	69034	8556	24874	67496	2266	157757	8.40	2.675
LOS ANGELES	3620543	3546769	73774	1322804	514396	78877	124895	596970	7666	1234542	6.67	2.873
LYNWOOD	64286	63123	1163	14573	8326	1068	1890	3205	84	14193	2.61	4.447

LOS ANGELES COUNTY POPULATION AND HOUSING ESTIMATES
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PRINTED 04/28/94

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					SINGLE		MULTIPLE					
CITY	TOTAL	HOUSE-HOLD	GROUP QUARTER	TOTAL	DETACHED	ATTACHED	2 TO 4	5 PLUS	MOBILE HOMES	OCCU-PIED	% VACANT	HOUSE-HOLD
MALIBU	11336	11234	102	5621	3397	523	405	647	649	4744	15.60	2.368
MANHATTAN BEACH	33077	33076	1	14988	9948	1235	2787	1015	3	14252	4.91	2.321
MAYWOOD	28850	28682	168	6659	2700	978	1470	1499	12	6513	2.19	4.404
MONROVIA	37545	37308	237	14139	7625	1560	1387	3291	276	13489	4.60	2.766
MONTEBELLO	60916	60463	453	19295	9230	1383	2978	5497	207	18553	3.85	3.259
MONTEREY PARK	63111	62840	271	20496	11445	1977	2118	4897	59	19686	3.95	3.192
NORWALK	97303	94838	2465	27409	19925	1219	782	5010	473	26548	3.14	3.572
PALMDALE	98314	98215	99	34065	25332	513	873	5337	2010	30123	11.57	3.260
PALOS VERDES ESTATE	13657	13645	12	5155	4756	35	34	329	1	4982	3.36	2.739
PARAMOUNT	52713	52354	359	14582	5884	1735	1027	4437	1499	13905	4.64	3.765
PASADENA	134824	130904	3920	53458	24943	3598	4719	20174	24	50651	5.25	2.584
PICO RIVERA	60593	60062	531	16346	12297	706	259	2611	473	15961	2.36	3.763
POMONA	138624	135673	2951	39029	23415	2847	3171	7760	1836	37230	4.61	3.644
RANCHO PALOS VERDES	42210	41786	424	15581	11976	1113	213	2274	5	15069	3.29	2.773
REDONDO BEACH	62721	62682	39	28703	11147	3857	4027	9580	92	27465	4.31	2.282
ROLLING HILLS	1912	1912	0	681	679	1	0	1	0	646	5.14	2.960
ROLLING HILLS ESTAT	8015	8015	0	2927	2273	598	23	31	2	2858	2.36	2.804
ROSEMEAD	53798	53150	648	14190	9671	1838	881	1411	389	13776	2.92	3.858
SAN DIMAS	33909	32769	1140	11759	7259	1685	313	1602	900	11315	3.78	2.896
SAN FERNANDO	23712	23461	251	5962	3805	523	698	831	105	5742	3.69	4.086
SAN GABRIEL	38687	38144	543	12781	7147	871	942	3791	30	12252	4.14	3.113
SAN MARINO	13056	12935	121	4470	4433	20	2	11	4	4305	3.69	3.005
SANTA CLARITA	128766	127611	1155	46281	26128	5985	1799	10145	2224	43497	6.02	2.934
SANTA FE SPRINGS	15542	15522	20	4801	3038	245	107	1290	121	4579	4.62	3.390
SANTA MONICA	89809	87193	2616	48244	9171	1804	6017	30996	256	45403	5.89	1.920

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					SINGLE		MULTIPLE					
CITY	TOTAL	HOUSE-HOLD	GROUP QUARTER	TOTAL	DETACHED	ATTACHED	2 TO 4	5 PLUS	MOBILE HOMES	OCCU-PIED	% VACANT	HOUSE-HOLD
SIERRA MADRE	10947	10827	120	4883	3375	290	373	840	5	4667	4.42	2.320
SIGNAL HILL	8808	8598	210	3805	911	475	780	1638	1	3487	8.36	2.466
SOUTH EL MONTE	21440	21281	159	4860	3117	318	305	542	578	4771	1.83	4.460
SOUTH GATE	88926	88673	253	22916	12279	2209	3904	4218	306	22297	2.70	3.977
SOUTH PASADENA	24299	24041	258	10789	4862	611	1248	4066	2	10229	5.19	2.350
TEMPLE CITY	32192	31669	523	11683	9405	665	454	1150	9	11195	4.18	2.829
TORRANCE	136747	135667	1080	55587	29988	3125	3239	18154	1081	53263	4.18	2.547
VERNON	79	73	6	30	11	4	2	13	0	28	6.67	2.607
WALNUT	30862	30836	26	8457	7962	96	14	201	184	8164	3.46	3.777
WEST COVINA	99824	99321	503	31534	20473	2584	1387	6804	286	30471	3.37	3.260
WEST HOLLYWOOD	37041	36627	414	24043	1732	818	1862	19625	6	22715	5.52	1.612
WESTLAKE VILLAGE	7642	7642	0	3060	1984	642	75	202	157	2895	5.39	2.640
WHITTIER	80646	78015	2631	29112	18842	1261	2160	6649	200	27971	3.92	2.789
INCORPORATED	8268781	8116486	152295	2941302	1362449	192277	267777	1073975	44824	2768451	5.88	2.932
UNINCORPORATED	961818	937151	24667	286963	198964	18841	17162	41114	10882	272156	5.16	3.443
COUNTY TOTAL	9230599	9053637	176962	3228265	1561413	211118	284939	1115089	55706	3040607	5.81	2.978

VALID ADDRESS RANGES IN SIGNAL HILL

STREET NAME	NUMBER RANGE		ZIP CODE
Alamitos Ave	2039 - 2073		90806
Alliance Ave	1120 - 1199		90806
Atlantic Ave *	2600 - 3398	even only	90806
Brayton Ave	2400 - 2499		90806
	3300 - 3389		90807
Broadway Ct	3300 - 3389		90807
Burnett St	900 - 1999		90806
California Ave	2350 - 2599		90806
	2601 - 2999	odd only	90806
	3000 - 3387		90807
Canton St	634 - 999		90806
Cerritos Ave	2220 - 2599		90806
	3201 - 3381		90807
Cherry Ave	1896 - 2999		90806
Columbia St	646 - 999		90806
Combellack Dr	2400 - 2799		90806
Coronado Ave	1800 - 1899		90804
Crescent Dr	1925 - 2174		90804
Creston Ave	1600 - 1998		90806
Dawson Ave	1800 - 2799		90806
Discovery Wy	1939 - 1995		90804
Ellis Ave	1800 - 1899		90804
Falcon Ave	3300 - 3381		90807
Freeman Ave	1800 - 2100		90804
Gardena Ave	2400 - 2999		90806
Gaviota Ave	2001 - 2799		90806
Gladys Ave	1843 - 1999		90804
Grant St	3200 - 3381		90804
Gundry Ave	2100 - 2899		90806
	3300 - 3382		90807
Hathaway Ave	2300 - 2401	N/S	90806
	2800 - 2999	E/W	90806
Hill St	1200 - 2599		90806
	2600 - 2799		90804
	2801 - 3399	odd only	90804
Hummingbird Ln	2916 - 2996		90804
Industry Dr	3200 - 3399		90806
Junipero Ave	1800 - 2899		90806
	2901 - 2999	odd only	90806
Kelly Dr	2133 - 2151		90806
Legion Dr	2240 - 2275		90806
Lemon Ave	2269 - 2599		90806
	3200 - 3392		90807
Lewis Ave	2300 - 2599		90806
	3200 - 3379		90807
Lime Ave	2600 - 2699		90806
	3300 - 3385		90807
Marietta Ct	3300 - 3389		90807
Mars Ct	3300 - 3389		90807
Minerva Ct	3300 - 3389		90807
Molino Ave	1800 - 1999		90804
	2200 - 2399		90806
Moonstone Drive	2816 - 2896		90804
Myrtle Ave	2600 - 2699		90806
	3300 - 3389		90807
Nevada St	900 - 1199		90806
Obispo Ave	1800 - 1999		90804
	2001 - 2099	odd only	90804
	2201 - 2299		90806
Ohio Ave	2100 - 2199		90804
	2200 - 2399		90806
Olive Ave	2700 - 2999		90806
	3300 - 3387		90807
Orange Ave	2201 - 2599		90806
	2600 - 2998	even only	90806
	3100 - 3386		90807
Orizaba Ave	1800 - 2165		90804
Pacific Coast Hwy	2201 - 3599	odd only	90804
Palm Dr	2400 - 2599		90806
Panorama Dr	2100 - 2799		90806
Patterson St	640 - 999		90806
Raymond Ave	1800 - 2799		90806
Redondo Ave	1800 - 1900	even only	90804
	1801 - 1965	odd only	90804
	2201 - 2599	odd only	90806
Reservoir Dr W	1801 - 1916	odd only	90804
Rose Ave	2200 - 2799		90806
St. Louis Ave	1840 - 2799		90806
Signal Pkwy	2600 - 2799		90806
Signal Pt	2820 - 2865		90804
Skyline Dr	2000 - 2799		90806
Spring St	642 - 999		90806
	1001 - 1099	odd only	90806
	1200 - 2398	even only	90806
Stanley Ave	1800 - 2399		90806
Stanley Pl	2000 - 2018		90806
Sunset Vw	2809 - 2995		90804
Temple Ave	1800 - 2199		90804
	2201 - 2299		90806
	2465 - 2899	odd only	90806
Terrace Dr	2032 - 2061		90806
Vernon St	900 - 999		90806
Wall St	2600 - 2799		90804
Walnut Ave	2021 - 2999		90806
	3201 - 3373	odd only	90807
Walton St	701 - 899		90806
Wardlow Rd *	600 - 1598	even only	90807
Willow St, E	615 - 899	odd only	90806
	900 - 999		90806
	1000 - 1198	even only	90806
	1200 - 2799		90806
	3100 - 3398	even only	90806
19th St	2000 - 2599		90806
	2600 - 3499		90804
20th St	1711 - 2599		90806
	2600 - 3199		90804
	3200 - 3388	even only	90804
21st St	1451 - 2599		90806
	2600 - 2799		90804
23rd St	1100 - 2799		90806
25th Pl	900 - 999		90806
25th St	900 - 1999		90806
27th St	660 - 999		90806
	1200 - 2399		90806
28th St	640 - 999		90806
	1200 - 2798		90806
29th St	640 - 999		90806
	1200 - 1999		90806
32nd St	1000 - 1399		90807
33rd St	649 - 1599		90807

* Address may be in Long Beach depending on the position of the building on the lot.

Rev. 12/8/94

